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ABSTRACT

This monograph represents an attempt to deepen the understanding of educational contexts and practices in Hungary and Finland, to shed some light on findings in multi-national studies, and to serve general information interests. The study documents observations about the Finnish educational scene in late 1992, although the situation has changed some since. The report discusses historical and structural aspects of the two societal and educational systems, identifying issues of fundamental concern, particularly in the field of curriculum. The role, content, and organization of the matriculation examination in Finland are given special attention, while these are perceived as embodiments of national educational ideals. Using the research experience common to both, characteristic student achievement profiles, as well as between-school and gender differences are compared in the two countries, noting the different emphases in their humanistic versus scientific-technical concerns. This expands into a review of the respective systems of assessment, where both countries have obvious needs for development. The volume contains the following sections: (1) "Introduction"; (2) "School Structure, School Types"; (3) "Curriculum Issues"; (4) "Matriculation Examination"; (5) "Effectiveness of the Respective Systems of Education"; (6) "Systems of Educational Evaluation"; (7) "Bibliography"; and (8) "Appendix." (EH)

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UTE FOR EDUCATIONAL RESEARCH PUBLICATION SERIES B

Theory into practice

Zoltán Báthory – Kimmo Leimu

FINNISH AND HUNGARIAN EDUCATION COMPARED: SELECTED ISSUES OF MUTUAL INTEREST

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FINNISH AND HUNGARIAN EDUCATION COMPARED: SELECTED ISSUES OF MUTUAL INTEREST

Báthory, Zoltán
Leimu, Kimmo

Jyväskylä, Finland
Institute for Educational Research
1994

Present-day premises of the first Finnish-language secondary school in Finland – the Jyväskylä Lyceum.

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This monograph represents an attempt to deepen the understanding of certain educational contexts and practices in Hungary and Finland, to shed light on some findings in multi-national studies, and serve general information interests. It documents the Hungarian author's observations concerning the Finnish educational scene in late 1992. Although the situation has changed since, it is hoped that interpretation of results and indicators published elsewhere will benefit from such background information.

The report discusses some historical and structural aspects of the two societal and education systems, identifying issues of fundamental concern, particularly in the field of curriculum. The role, content and organization of the matriculation examination in Finland are given special attention, while these are perceived as embodiments of national educational ideals. Using the research experience common to both, characteristic student achievement profiles, as well as between-school and gender differences are compared in the two countries, noting the different emphases in their humanistic vs. scientific-technical concerns. This expands into a review of the respective systems of assessment, where both countries have obvious needs for development.

Descriptors: comparative education, system of education, curriculum, matriculation examination, achievement, assessment.

TIIVISTELMÄ

Báthory, Z. & Leimu, K. 1994. Finnish and Hungarian Education Compared: Selected Issues of Mutual Interest. University of Jyväskylä. Institute for Educational Research. Publication series B: Theory into Practice 87.
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Tämän julkaisun taustana on sen tekijöiden monivuotinen yhteistyö vertailevan koulutustutkimuksen parissa. Siinä syvennetään koulutuksen eräiden kehystekijöiden ja käytänteiden tuntemusta Suomen ja Unkarin osalta. Samalla pyritään valottamaan näkökohtia, joilla on merkitystä monikansallisten koulutustutkimusten tuottaman tiedon tulkinnassa yleensäkin. Raportin havainnot edustavat lähinnä loppuvuoden 1992 tilannetta, jolloin unkarilainen tekijä työskenteli vierailevana tutkijana Suomessa. Vaikka molemmissa maissa on tämän jälkeen tapahtunut jopa dramaattisiksi katsottavia muutoksia, monet tässä tarkastelluista kysymyksistä ovat niin perustavanlaatuisia, että myös ohikiitävän hetken kuvauksella voi olla merkitystä jatkuvan koulukeskustelun ja kehityksen ymmärtämiselle. Sellainen on tarpeen myös eri lähteistä saatavien tulosten ja indikaattorien tulkinnalle.

Raportissa tarkastellaan näiden kahden maan koulutusjärjestelmien eräitä historiallisia ja rakenteellisia kehystekijöitä, kuten koulutuksen resurssointia ja opetussuunnitelmatilannetta. Erityistä huomiota kiinnitetään ylioppilastutkinnon rooliin, sisältöön ja käytännön järjestelyihin Suomessa, koska näiden katsotaan heijastelevan omintakeisesti kansakunnan koulutusihanteita. Molemmille maille yhteisten koulutustutkimusten perusteella esitetään myös joitakin saavutusprofiilien vertailuja. Tällöin huomioidaan eroja mm. humanistisen vs. tieteellis-teknisen alueen aseman sekä koulujen ja eri sukupuolten välisten erojen osalta. Tarkastelu ulotetaan edelleen koulutuksen arviointijärjestelmiin, joiden osalta molemmissa maissa nähdään selviä kehittämistarpeita.

Asiasanat: vertaileva kasvatustiede, koulutusjärjestelmä, opetussuunnitelma, koulusiavutukset, arviointi.

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"... there is the question of what will happen to the Scandinavian model with the present changes in Europe. ... What kinds of welfare models are likely to be chosen by the East-European countries?"

Erik Allardt

INTRODUCTION

Why Comparison?

Learning from each other is the most important objective of comparative studies. This study makes an effort in this regard, on the basis of Finnish and Hungarian educational and pedagogical data, analyses, and opinions.

Several good reasons may be enumerated for a Finnish-Hungarian educational- pedagogical comparison. Among them, perhaps the most important reason is to examine and analyze whether in the midst of the actual changes in Europe (European integration, decolonization of Eastern Europe) the Nordic model has still been effective in the field of education policy and pedagogy and, if the answer is affirmative, what kind of effect it may exercise on an East-European country seeking a way out. Is it able to give orientation and motivation to those changes? The second reason is that fairly remarkable similarities may be observed in the respective situation, importance and position of the two countries. As a consequence, the similarities and differences in their respective history and social development presumably hold interesting and important lessons from the viewpoint of improving education, too. The third and, from an emotional viewpoint, not insignificant reason rests upon the linguistic relations between the two nations which resulted in the development of extensive economic, social and

cultural relations, which existed even during the cold war. Finally, it is also important to note that the authors of this study have been bound together by common research activities of almost 25 years in the framework of an international educational research enterprise: the IEA.[1]

In part, this is the reason why the Hungarian author could enjoy, as a fellow researcher, the hospitality of the Institute for Educational Research of the University of Jyväskylä during three months in the autumn of 1992 - and that stay has given an impetus for this work. It was at that time that the Finnish and Hungarian authors decided to make a common analysis related to a few aspects of the respective public education of the two countries. The authors proceeded from the fact that they were in different positions (the Finnish author could not study Hungarian public education on the spot) and, therefore, they decided to base the analysis, in this first stage of the comparison, mostly on the experience of the Hungarian author in Hungary and Finland. They also agreed about a subsequent completion of the comparative analysis of a few more aspects of public education of the two countries, after the Finnish author's corresponding visit in Hungary.[2]

Among the several issues of education policy and pedagogy, we have chosen **four complex aspects** for comparison. All of them are strategically important under the existing circumstances of democratizing and modernizing Hungarian public education. These aspects are as follows:

1. **school structure** and school types;
2. **curriculum-policy**, as well as theoretical and practical issues related to the curriculum (national core curriculum, school-based curricula, etc.);
3. **matriculation examination**;
4. **effectiveness** of the respective systems of education, on the basis of findings in the international (IEA) educational surveys; and
5. comparative analysis of the **educational assessment systems** adopted in the two countries.

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[1] International Association for the Evaluation of Educational Achievement. IEA Guidebook, 1993.

[2] The working process developed as follows: subsequent to the approval of the content of the study, the Hungarian author started to write the study during his stay in Finland. After having returned to Hungary, he continued the writing and forwarded the manuscript to the Finnish author who started to review the Finland-related parts and to formulate his own thoughts. Subsequently, the two authors agreed on the final English version of the manuscript.

Finnish-Hungarian comparative studies of education policy and pedagogy are few in number.[3] This study intends to call the attention of both Finnish and Hungarian educational researchers to the possibilities and lessons hidden in the Finnish-Hungarian relation. As a precondition, a variety of descriptions and analyses written in English should be published about Hungarian public education, in the same way as excellent reports, descriptions and analyses are available in English about important issues and events in Finnish education. These resource materials have given great help to the Hungarian author in understanding the Finnish circumstances. It also has to be appreciated that Finnish educational researchers and principals generally speak English very well.

Several **methods** have been adopted in this study: reading and examining research reports and textbooks, visiting schools, making interviews and having conversations. It is a significant benefit that primary empirical data and their secondary analyses may also be included into the analysis, as a result of common IEA research activities. Every topic in this study has been discussed in round-table conferences organized at the Finnish educational research institute. This method proved to be very useful primarily from the viewpoint of understanding a given topic and of starting to think about their complexities.

The Hungarian author wishes to avail himself of this opportunity to say thanks to Erkki Kangasniemi, director of the Institute for Educational Research of the University of Jyväskylä, for having made the fellow researcher invitation possible and for having given help in the elaboration of the topic. Thanks are also due to Kimmo Leimu, the Finnish author, without whose friendship and expert knowledge this enterprise could not have been realized. Comparative studies belong to a literary genre characteristically requiring collaborative work, thus the task assumed by the authors certainly could not have been accomplished without the help of friends and colleagues at the research institute. Thanks to all of them, especially to Sauli Takala, Hannu Saari, Pirjo Linnakylä and Jouni Välijärvi.

[3] Eight Finland-related publications - mostly reports and descriptions - appeared in Hungarian between 1985 and 1992. See Bibliography for more details.

4

Reflections on Parallels in History

The educational researcher, taking interest in history but not being a historian, is primarily surprised not at the fact generally known to be related to the ancient origin of and kinship between the Finns and Hungarians, but rather at the fact that both of the countries developed at the periphery of the centre of Europe - Western Europe - in both a geographical and political sense (Jutikkala-Pirinen, 1979; Jakobson, 1990; Lukacs, 1993). That peripheral situation might have been the cause of the fact that, during their respective history, they became **buffer states** - in very similar ways - between the great power efforts of their respective neighbours. For centuries, the Finns had been subject to the toils due to the conflict between the Swedes and the Russians while the Hungarians had the same fate between the Austrian Habsburgs and the Ottoman Turks. Subsequent to the relative autonomy possible within the framework of the Austro-Hungarian Monarchy and the Finnish Grand Duchy within the Tsarist Russia, respectively, both nations finally became politically independent only in the early 20th century: the Finns attained their independence in 1917, at the time of the revolutionary turmoils in Russia [as a result of their civil war-like fight for independence], while the Hungarians became independent on the ruins of World War I and the Trianon Treaty. Later, after World War II, the Finns were forced to surrender significant territories to the Soviet Union.

In the 19th century, almost up to the attainment of independence, the **language issue** played a prominent role in shaping the national identity of Finland and in the process of becoming a nation. The Fennomans demanded one nation and one language while the Svecomans fought for two nations and two languages. In that period, the liberals still had a weak voice though they came out, in a surprisingly modern way, with the alternative of one nation and two languages. The Fennomans were led by intellectuals patriotic at heart such as primarily Snellman, the great Finnish politician and philosopher of the mid-1800's. But the great poets and artists of the "romantic" period, such as Elias Lönnrot, the compiler of the Kalevala, or Runeberg, the poet author of the Finnish national anthem, also supported the Finnish cause from the very beginning. The Russian authority had shown for long a time surprising tolerance of the Swedish-Finnish language dispute. The spectre of an aggressive Russification had only appeared on the scene at the end of that period.[4] The Russian language was used in the highest offices in the Finnish

[4] "Swedes we are not, Russians we do not want to become; let us be Finns", Snellman argued. (Jutikkala, Pirinen, 1979, p. 174.)

Grand Duchy but Swedish was used in the local administrations, in the Parliament, at secondary schools and at universities. Swedish was the language of intellectuals while 'common people', most farmers, tradesmen, craftsmen spoke Finnish.

The language struggle had been intertwined with the issue of schooling from the very beginning. The language of instruction at secondary schools and universities was considered strategically important by both sides. The academic secondary schools preferring classical studies were intended primarily for the children of Swedish-speaking families while those schools emphasizing practical studies (e.g., science, modern languages) rather were intended for the children of Finnish-speaking families (Välijärvi, 1992). The first academic secondary school teaching in Finnish was opened in Jyväskylä, in 1858. (This was a rather path-breaking event, as it was seriously debated whether the Finnish language would be amenable to use for such intellectually demanding task.) Beginning with the mid 19th century, more and more professors switched into giving lectures in Finnish at the University of Helsinki.

The Protestant Church played a determining role in organizing elementary education in Finnish.[5] Perhaps this is the reason why the Christian mentality and value-awareness of Finnish education have been preserved even after the secularisation of schools and education (1865) and why they still exist even today. (In Finnish schools, every morning before teaching starts, the students will listen to some topic with a moral/ethical import. There used to be common prayer before.)

Finland actually has **two official national languages**: Finnish and Swedish. This means that all official documents, services and proceedings have to be available in both as a matter of fundamental civic rights. Among others, this includes education which is available in both languages from kindergarten to university, thus actually constituting a double system. Both of these 'domestic languages' are compulsory at the schools, and upper secondary school students also have to take a matriculation examination test in both languages. It is well-known that such provision far beyond even the West-European norms can be experienced in Finland with regard to practically every aspect of the ethnic and minority issues. Thus Finland qualifies as a

[5] "The clergy had looked after the education of small children with praiseworthy zeal and made the Finns a literate nation ..." (Jutikkala, Pirinen, 1979, p. 184.)

modern Western country, not only in economic and technical sense but also in social regards, in which schooling and education, in the original sense of the word, is a **national priority issue**.

Unfortunately, the same cannot be said of Hungary, even if the historical parallels can be extended to the struggles in Hungary in the 19th century for the official acknowledgement of the Hungarian language and to the permanent efforts made for its cultivation. The role of national intellectual reformers and of the historical Churches in organizing education also may be considered significant. A deep concern about public education would have been justified by the deep roots of the Hungarian culture, too. Yet, Hungarian public education - after having been organized according to liberal and democratic norms in the mid 19th century - never entered the first line of social issues in a similar way education did in Finland. The accent of education policy, after the beginnings in the reform period, was shifted soon to the organization of science, while the problems of education were increasingly intended to be solved through a direct intervention by the state (Glatz, 1992). The etatist "intervention" - with changing forms and intensity - all the while stayed to have been a determining characteristic in Hungarian public education.

The process of evolution, containing common trends, of the two countries pulled them apart definitely beginning with the outset of World War II. The Finns - unlike the Hungarians - have always clearly recognized their enemies and allies. They took up the fight with the arch-enemy in a determined and unanimous spirit (Winter War, Continuation War) and turned against the Nazi Germans in due time. Later, after World War II, the neutral compromise policy called "Finlandization" created opportunities for a welfare state and for social modernization. Finland refused the Marshal aid and, by that and similar manner, won the Soviets' confidence which could be exploited well in commerce. As to Hungary, a colonial status fell to its share in the Soviet Empire with which Hungary took up a fight in vain in 1956. Hungary remained politically oppressed and economically poor compared to Western Europe of that period. The recent change in the political system has opened new opportunities for Hungary but it cannot yet be determined whether it shall be able to live with these opportunities. In other words, **Finland has managed**, by courage, national unity, tolerance and even by astuteness and sensible compromises when needed, **in getting rid of the political periphery while Hungary has not yet succeeded to do so**.

CHAPTER 1

SCHOOL STRUCTURE, SCHOOL TYPES

The territory of Finland is 3.6 times larger than that of Hungary but the population of the former is only half of the latter. The geographical position of Finland is less favourable than that of Hungary while the Finnish economic potential and its development, the social infrastructure of the country is far more superior to the Hungarian level. As a result, the Finnish standard of living is much higher than the Hungarian one (Table 1).

Finland is still one of the richest and most developed countries in Europe and in the world, although several incidents in the early 1990s have shattered this position. According to the "adjusted GDP value"[6] of 1991, **Finland is in the lowest ⅓ of the two dozen OECD countries**, succeeding United Kingdom and preceding New Zealand (Education at a Glance, OECD-CERI, INES 1993). And although the Finnish economy was thoroughly shaken in the early 1990s by changes in Eastern Europe, with certain unfortunate consequences of her international economic exchange, including the collapse of the Soviet market and leading to straightforward depression (the standard of living has clearly decreased and unemployment increased to 20 per cent), the permanence of such radical negative developments is still to be seen.
- According to the per capita GNP value (1990) - Finland is still more than **nine times richer** than Hungary.

[6] GDP adjusted for purchasing parity power (PPP). Education at a Glance, OECD-CERI-INES, 1992 and 1993 - indicator C7.

Economic wealth explains much but not all. Not simply a share proportional to the resources of a rich country, but much more than that is allocated to education in Finland (Table 2). Even the share from the GNP (of the GDP, according to OECD calculations) allocated to education is above the average but public expenditure on education **represents an extremely high percentage** in the total expenditure.[7] This level is unique even in Northern Europe, the most developed region in the world from the viewpoint of public education! In Hungary, however, the share allocated to education from the GNP comes close to the average of developed countries, but the percentage of public expenditure on education is not even half of the corresponding percentage in Finland. This fact reflects a narrow-minded policy. The data mentioned clearly reveal that public education has been given priority in Finland (and let it be added: in the entire "Nordic" region) from the beginning of the social modernization (roughly from the early 1960s) and it has attained the rank of a state policy - and not only by words of mouth, as in Hungary.

1.1 Finland

Finnish public education is based on the **comprehensive school** (Peruskoulu) offering uniform general education for all. This school type adopts a 6+3 structure: six years of elementary school (lower stage) which functions in a system employing usually one but sometimes more teachers, and three years of lower secondary school (upper stage of the comprehensive school). Students enter school at the age of 7 and the comprehensive school extends to the entire length of compulsory schooling (age of 7 to 16). This school type is comprehensive from two points of view: it conveys more or less identical, **uniform** knowledge to **every stratum** in the society. This definition corresponds to those characteristics of comprehensive schooling formulated e.g. by Torsten Husén, among the "fathers" of that movement in the Nordic countries (Husén, 1989). The system of comprehensive schools has been extended to the entire country, from the densely populated South to the sporadic settlements in the Lapland, and thus become an important instrument for realizing the equality of educational opportunities. The second, three-graded upper stage (lower secondary school) often operates jointly with the three-graded upper secondary school, mostly functioning in towns. As far as the six-graded elementary school is concerned, under the provisions of the

[7] It is rather confusing and does not promote comprehension that different economic indicators are adopted by OECD and UNESCO.

law, schools shall be built in every region where at least 12 children in the age bracket of schooling live - what is even more, in such a way that no student should come from a distance greater than 5 kilometres. In recent years - with extensive migration from rural areas - this principle has come to a hard test, and with the merging of school districts, overcoming the situation necessitates extensive transportation.

The nine-graded Finnish comprehensive school was instituted during the reforms realized in the 1970s, ten years after the introduction of the Swedish comprehensive school. By that move, the Finns joined the "Nordic" school model and succeeded in creating stability in the most debated issue of school structure for a long period.[8] This is in some constrast with the Hungarian school system, which has never been both uniform and internally differentiated, as is the case with the school systems in the Nordic region.

After graduating from the ninth grade, more than half of the students - of which an average of some 60 percent are girls - continue their respective studies at **upper secondary schools** with an emphasis put on general knowledge, while the other half may study at vocational training schools and institutions. Compulsory schooling extends up to the age of 16 and no one is allowed to leave school before this age. In practice, a decisive majority of the youth attend school up to ages of 18 to 19. The upper secondary school students take the matriculation examination at the end of their third gymnasium year. (Only a small proportion of all students attending vocational training schools may, at present, take the matriculation examination after completing their respective studies.). The Matriculation Board Certificate is a precondition - but not sufficient - for being enrolled in higher education. As a result, most of the universities organize entrance examinations.

There are three levels of **vocational education**:
(1) school level (the most frequent), providing for skilled worker training;
(2) institution level, providing for managerial and planning tasks; and
(3) higher level "professional vocational higher education", i.e. colleges, which are currently being developed. As to the content, the student may choose from 25 training orientations and about 200 trades, or "vocations". The duration of vocational training may vary between 1 and 6 years depending on the trade

[8] In the "Nordic" region, comprehensive schools can be found also in Norway, Iceland and partly in Denmark. In the latter country, the body of uniform knowledge is already strongly differentiated in the concluding three years of the nine-graded basic school.

and the level. Earlier, vocational education was definitely separated from general education. At present, serious efforts are made to increase the attraction of the vocational sector and thus make it a more competitive alternative to general academic education given at the gymnasia, and also to integrate those two branches of education by allowing mutual credits.

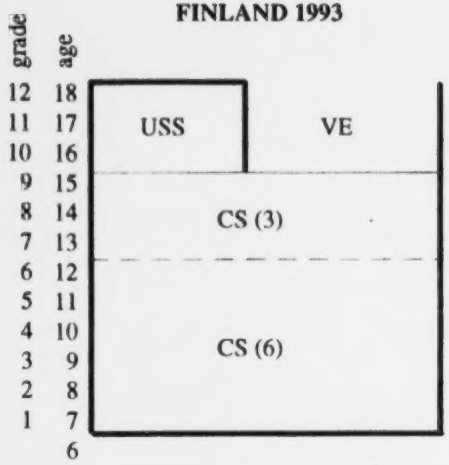
The developed nature of Finnish public education is characterized by the fact that **upper secondary education** as a whole may be considered **complete** since it extends to the entire relevant population (16 to 18 year-olds) and has **a balance of general and vocational education**. With regard to these two educational indicators, Finland is ranked high even among the OECD countries. While upper secondary schooling may be termed complete in the OECD countries (80 to 100 per cent of the relevant population attend either general or vocational secondary education), the extension of general education - the length of such training observed - is superior to the Finnish ratio only in a few countries (e.g., Japan, Australia, England, New-Zealand; Education at a Glance, 1992, p. 73, ibid., 1993, p. 117-120).

Chart 1.1 (page 11) demonstrates the fundamental **structure and major school types** in the Finnish and Hungarian systems of public education. It also seeks to indicate the consequences - highly probable to occur in the next few years - of the actual and accelerated changes in Hungarian public education (Leimu, 1985; Herranen, 1994; Developments, 1992; Báthory, 1985; Báthory, 1994.)

1.2 Hungary

Hungarian public education is based - for more than forty years - on an eight-graded unified school: the **general school**. Pupils enter the general school between the ages of 5 to 7 but most often at the age of 6. The general school consists of two stages: elementary stage (4 years) and lower secondary stage (4 years). About 40 to 50 per cent of the total of students completing the eighth grade enter academic secondary schools and vocational secondary schools, while 40 to 45 per cent of them are enrolled in trade schools. (This trend is rapidly changing in favour of academic secondary schools.) Academic and vocational secondary school students may take the matriculation examination. The Certificate of Matriculation Examination is a necessary but not sufficient precondition to being enrolled in higher education. Enrollment is further dependent on a successful entrance examination. This system is called "double hurdle" in Hungary.

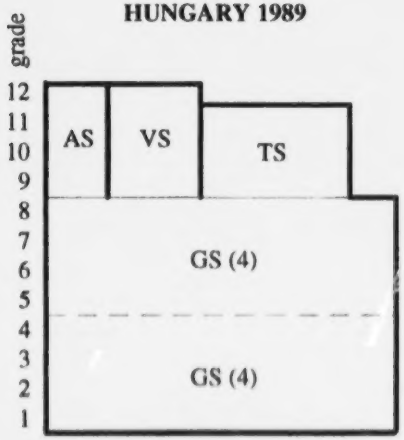
Chart 1.1 Systems of education



CS - comprehensive school (6+3)

USS - upper secondary school

VE - vocational education

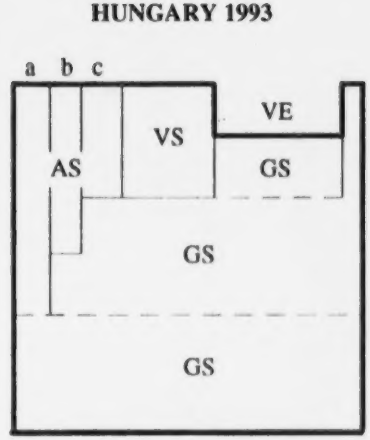


GS - general school (4+4)

AS - academic secondary school (4)

VS - vocational secondary school (4)

TS - trade school (3)



GS - general school:
4, 6, 8, 10, 12

AS - academic secondary school:
a - 8 grades,
b - 6 grades,
c - 4 grades

VS - vocational secondary school (4)

VE - vocational education (trade schools and training schools)

Since long, the most burning problem in Hungarian upper secondary education is that **relatively few** students - about 50 per cent - of the relevant population (14 to 18 year-olds) attend **any** of the four-graded upper secondary schools, and **students attending upper secondary schools offering general education** (academic secondary schools) **represent a smaller proportion of these.** Naturally, there always may be debates on what can be considered upper secondary education of full extent within vocational education but Hungarian vocational education provided at trade schools certainly is not such. (Such low-quality schools may possibly exist even within the Finnish vocational secondary education.) Thus, Hungarian upper secondary education cannot enter into competition in any quantitative regards with the public education of other industrialized countries.

In the 1970s, radical reforms were effected in the structure and content of Finnish public education. Some of those reforms were strongly influenced by the Swedish pattern. The existing structure is largely an outcome of the public education reforms of that period, as only minor changes in the basic structure have been effected after it. In spite of the criticism and debates, Finnish public education was consolidated to a considerable degree in the past ten years. Such is not the case with Hungarian public education. The structural reform undone in the 1970s, and the malfunctions accumulated in the years of the party state have come to the surface in the wake of changes in the social and political system and caused tensions in several fields. Thus, the tasks of the "rubble clearance" and those of the belated modernization have appeared together in Hungarian public education, in the same way as they have done in the economy and in other different fields in the life of the society.

Beginning with 1989, several distinct changes have appeared in the structure of Hungarian public education. Those changes can be traced back, on the one hand, to the crisis of the general school and, on the other hand, to the problems of secondary education: problems unsettled for decades and swept under the carpet.

The entire Hungarian public education, and mostly the general school with its rigid and undifferentiated system and logic of functioning, became less and less able to satisfy the social and cultural needs related to schooling. Any such responsiveness was made impossible by the firm ideological and central guidance of schools, and by the official suppression of educational autonomy. As a consequence, the eight-graded general school could only formally satisfy

the needs related to comprehensiveness.

Even more serious problems appeared at the secondary level. The traditionally developed three branches - academic secondary schools, vocational secondary schools, and trade schools - with their own selective functioning, served to preserve and tighten the rigid social structure. As proven by educational sociologists, that system of secondary education in fact counteracted social mobility. As a result of the unsolved problems of general schools and trade schools, some 20 per cent of relevant populations fell behind and stayed outside public education and drifted to the periphery of social life. However, the greatest problem was caused by the bottle-neck at the secondary level - including the small proportion of general education (academic secondary schools) - and this problem still exists. The narrow basis of selection and the questionable quality of the secondary level constrains the development of higher education (universities, colleges) and thus counteracts the modernization efforts of the Hungarian society.

On the basis of the above, it may be understood why the traditional Hungarian structure of schooling was shaken by the first sign of changes in the political system and why fractures developed both on its surface and in its depth. New and newer efforts have appeared for improving that situation. However, the situation is complicated by the fact that spontaneous local (school, community) initiatives, as well as initiatives made by church school owners have been given too great a scopé in those changes. The Ministry has encouraged and supported those changes. This is the major reason why the government coalition, in the Hungarian Parliament in July of 1993, voted for the Public Education Act in which a **diversified school structure** has been codified. Nevertheless, a significant part of the political opposition, teachers and educational researchers continue to criticize both the Act and its articles related to the school structure. (This is the reason why the new social-liberal coalition, that came to power after the 1994 spring election, has decided to revise the Public Education Act.)

At present, **four critical points** concerning changes in the school structure may be identified in Hungary:

(a) The **lower stage** of schooling might well be extended from four to six grades. It would be necessary, in particular, having students develop basic skills more firmly than at present in the fields of communication skills (reading, writing, speaking) as well as problem-solving skills indispensable

for further studies. The duration of the primary school extends to five or six years everywhere in the world, except German speaking countries. The experts' efforts to extend elementary grades have so far not been supported by the official public education administration.

(b) At the secondary level, especially in the case of **academic secondary schools**, **expansiveness** may be observed: more and more academic secondary schools - the concern seldom has to do with general schools - are extending their existing four grades by two or four grades. Thus, in addition to the existing four-graded academic secondary schools, more and more six-graded and eight-graded academic secondary schools are beginning to function. (The academic secondary schools owned by different Churches are eight-graded academic secondary schools, almost without exception.) The expansion of academic secondary schools unequivocally is an effort to break out, which is explained either with modernization ideologies (e.g., utilizing talents, education of the élite) or with nostalgic reasons. The expansion of academic secondary schools is generally supported by the official circles while this effort is opposed by educational researchers.

(c) The expansion of academic secondary schools forces **many general schools to seek a way out**. The twelve-graded comprehensive schools (on the pattern of the Gesamtschule) and the ten-graded general schools are characteristic attempts. The latter, however, conflicts with the similarly unsolved problem of trade schools since the ten-graded general school, in itself, would be a progressive step provided there were no fears that the ten-graded general schools might become schools for "surplus" students in the environment of many different academic secondary schools and vocational secondary schools.

(d) **General education and vocational training** is being separated. (These two sectors of secondary education are regulated by two separate Acts.) Vocational secondary schools will probably be strengthened in this process while vocational training is expected to transform itself. Resulting from the economic difficulties, vocational training within the school system is becoming more and more difficult to maintain.

Those processes related to the school structure seem to strengthen - in their total effect - two contradictory tendencies. One may reckon, one the one hand, with a **quantitative extension of the upper secondary level** (in the fields of both general education and vocational training) and, on the other hand,

with an **exaggerated increase in the diversity of the school structure**. The former process is unequivocally positive: a precondition to democratization and modernization. The latter process, however, deserves a negative evaluation since it occurs in a period when attempts are made in the industrialized world to either decrease, or minimize the diversity (as e.g., in England, the Netherlands and Germany) or to maintain the unified secondary school concept (e.g., in Sweden and Finland). It frequently occurs, in particular in the public education systems of industrialized countries, that diversity appears **inside the schools** - through a differentiation in the content and in the organization of learning - and not between the school types as in Hungary. This is the particular reason why, in Hungarian efforts and experiments, more attention should be paid both to decreasing diversity of school types and to giving incentives and assistance to schools for their internal differentiation. And in this regard, much could be learnt especially of the countries in the "Nordic" region - thus of the Finns, too.

CHAPTER 2

CURRICULUM ISSUES

2.1 Curriculum policy

To begin with, one has to recognize the present situation in the entire administration culture in Finland (as most everywhere), which is in a state of rapid and fundamental change, aggravated by the demands of "managing decline" in the national economy. Thus we are necessarily trying to capture a passing moment in history, as what is said now is somewhat different from yesterday, and may well be outdated to-morrow.

In Finland - as in Western democratic states in general - the highest state level of education administration includes the Parliament, the Government and its specialized ministry: the Ministry of Education. Ministry officials, relatively few in number, deal mostly with education policy.[9] The public education tasks of the state are managed by a central administrative and development office, the National Board of Education (Opetushallitus) with more educational personnel. It is a respected organization in the capital city of Helsinki - and plays major role in organizing and guiding practical curriculum work through preparing what may be seen as *central guidelines* (opetussuunnitelman perusteet - the fundamentals of the curriculum). This will then serve as a major reference document for municipalities and schools in their curriculum development work, and may thus be seen as a vehicle for implementing policy. (In addition to curriculum issues, other work related to

[9] In Finland, educational and cultural affairs are headed by two ministers (Minister of Education, Minister of Culture) but there is a joint apparatus.

education administration - traditionally state inspection of schooling have also been dealt with by this organization.)

As Finnish government structure includes a division into 12 provinces, the second level of educational administration includes the **provincial governments** and their respective educational departments. These represent the central government at the regional level. Issues related to content and curriculum are not (any more) dealt with at this level, but the tasks include school management, planning, development and the integrated organization of different educational services, usually examined as municipal-level entities, or networks. Legal disputes of minor scale are often settled here, too. Apart from schools, attention is given also to public libraries, adult education and other cultural provisions. - This entire organization with its particular tasks is presently undergoing changes which have tended to diminish the role of the intermediate-level, provincial administration.

Communities - more precisely: education departments of the municipalities - constitute perhaps the **most important level** of curriculum policy. This then becomes the third level of education administration and the second level of curriculum work. A total of 465 municipalities exist in the country, and most of them have an educational/cultural department or section including, particularly in the smaller communities, also youth, sport, library affairs, and adult education. It also occurs - especially among the smaller communities - that several communities operate a collective educational department.

When decentralization of curriculum-policy is mentioned in Finland, it mostly means increasing the influence of communities and individual schools, and decreasing the influence of central authorities, such as the National Board of Education. According to the present practice, the NBE elaborates and issues general guiding principles related to the curriculum, on the basis of which the communities and schools elaborate their more concrete and precise curriculum principles. Only recently the central and municipal curricula used to be detailed and norm-setting, prescriptive guidelines offering rather limited scope of action for schools, which organized their education on the basis of these local **community curricula**. In principle, they have had the right to make minor changes and adaptations, and they generally did live with these rights. Thus, the practice of **limited decentralization**, developed by effect of the Education Act of 1983, was the essence of the Finnish curriculum-policy. - This situation is in a process of rather fundamental change in 1993-94. Considerably more decision-making power has been given to the schools,

who are obliged to elaborate their own curricula: profiling their goals, methods and resource allocations, and constrained only by very general central and municipal guidelines. Financial constraints, however, are of overriding influence, and qualifying many of the more 'noble' principles and aspirations.

The centrally elaborated curricula, guiding principles for curricula, and different community curricula may vary in principle, but the differences are not significant in practice. The Hungarian author thoroughly studied the community curricula of Jyväskylä - both the "blue" book for comprehensive schools and the "green" book for upper secondary schools - but they indicated high level of conformity with the central curricula. On that basis, one might conclude that the theoretically prevailing decentralization in effect has included **a hidden element of centralization**. The system does not work entirely that way, however, because of the **free market of textbooks** which offers some variety and opportunities for teachers and schools to adapt their instruction. It is obvious that **the educational work of teachers is shaped by textbooks and related manuals in a degree greater than by curricula.** The professional socialization of Finnish teachers may be seen influenced by the model of "one curriculum - several textbooks" while the mentality of their Hungarian colleagues was shaped by the model of "one curriculum - one textbook", not even mentioning the decisive effect of the political environment. Thus, Finnish teachers could preserve their educational autonomy even under the circumstances of a hidden centralization while to do the same was almost impossible for Hungarian teachers.

From a Hungarian viewpoint, it is extremely instructive and adequately characterizes the Finnish circumstances that centralization - including curriculum centralization - is not regarded as a manifestation of evil. In Finnish studies of curriculum theory, one may always read of the rational character of central planning. A happy country! one might say. In the same vein, the Education Act of 1983 does not prohibit but even authorize teachers to participate in the development of the local programme of their respective school. However, the teachers' joint planning model has not spread in the practice, mostly because teachers were not interested (Malinen, 1987). Malinen - in his study referred to - has stated: "Teachers were thus offered opportunities of interpreting the curriculum and of adapting its goals to their own teaching, but in part these opportunities were no more than illusory. The previous centralized planning organization was not dismantled, nor was there rapid development in the readiness or forms necessary for the realization of the new approach." (ibid.,

p. 73.) - It will be seen that activation of the local school level was later put on the agenda anew. The situation in 1994 is bringing about a different picture again, with considerable amount of school-based work being underway. This emerging new management culture quite obviously is bringing about greater variety in school programmes and character, and it will be of interest to see what are the long-term consequences of the "new freedom" in light of the prevailing educational and societal ideals.

Returning to the analysis of curriculum-policy (Table 3), it can be seen clearly that the Finnish practice of limited decentralization (or hidden centralization) sharply differs from the extremely centralized curriculum- policy of the former Hungarian party state, but even from that curriculum- policy suggested by the educational researchers grouped around the National Core Curriculum (Nagy, Szebenyi, 1990; Báthory, 1993a). The major difference between the two approaches (compare the Finland 1983 and the Hungary NCC-3 columns in Table 3) lies in the interpretation of the participation of the **community level**. This level was paid relatively less attention to in the Hungarian attempt made at democratizing curriculum policy because of the fact that there seemed to have been no guarantees, in most of the newly elected communities forming at that time (1990-1991), for an adequate representation of educational professionalism. However, educational professionalism did exist - even with extremely variable standards - in the schools! And it could be supposed primarily of the schools that they intended to get rid of the central dictate. The schools were encouraged to **drive a bargain** with their respective communities in the interest of adopting local programmes, while remaining as autonomous as possible.

The Finnish practice of limited decentralization, however, was strongly criticised for long years and, parallel with the change in the political wind, a more comprehensive and complete realization of the decentralization of curriculum-policy has been put on the agenda. From the point of view of our topic, it may be of indication value that in the past years, strong decentralization of education administration and curriculum-policy occurred in Sweden, the public education of which always exercised strong influence on the entire Nordic region including Finnish developments. Thus, e.g., the NBE has already been dismantled in Stockholm while Helsinki, for the moment, remains operative with the unification of the previous two National Boards of Education dealing with general and vocational education. The Nordic region - one of the most developed regions in the world from a viewpoint of public education - has definitely arrived at a new period in interpreting

education administration, curriculum-policy and school autonomy. As a consequence, responsibility is assigned and decisions related to the curriculum are increasingly made by the municipal and local school levels.

In the rest of the industrialized world - especially in Europe - it can be observed that the former unipolar and state centred curriculum regulation is transformed to **bipolar regulation**. The one-sided state regulation is gradually relieved by a system in which the state (in the name of the society), as well as the schools and the community sphere surrounding the schools have equal rights. On the one hand, the decisions related to the school and the content of teaching are decentralized step by step and commensurably transferred to the level of communities and schools. On the other hand, the state gives up its positions in such a way preserving its regulating function only in the common fields of culture. Modern democratic states do not withdraw from public education and curriculum-policy but seek to regulate them in a "self-restraining" way. Centrally elaborated guiding principles for curriculum and/or base curricula of national validity or national core curricula are usual means of this regulating function. This process started earlier in England and later spread to the Anglo-Saxon world, "tempted" even the liberal United States, became deep-rooted in the Netherlands, and has recently been put on the agenda in the Iberian countries and the countries of the Nordic region also including Finland. It is worthy of attention that the bipolar curriculum-policy appeared first in Hungary among the former socialist countries (Szebenyi, 1991; Ballér, 1993).

The Finnish experiments related to the establishment of bipolar curriculum-policy started several years ago, after careful preparations. Two or three experimental schools - called "aquarium" schools - in each of some 12 communities were organized, where - with the active participation of teachers - it is examined and considered how local school programmes (including the system of subjects and the weekly lesson hours) might be developed and how schools could be operated accordingly (Välijärvi, 1992a). At those aquarium schools, also the question of how the increase of school autonomy could be linked with a differentiation of the school organization and of teaching/learning, is also examined, with the purpose of modernization of the organization for learning. In addition, discussion on the rearrangement and decentralization of the decision-making levels has also been started at national level. Elaboration of a national curriculum frame was therefore initiated by the Ministry and assigned to the National Board of Education. The first results of this work has become available in 1994, enabling schools

to start work on their own planning and development. It certainly may be attributed to the above that there seems to be vivid interest in getting acquainted with Hungarian results and experiences related to the national core curriculum.

2.2 Systems of Subjects

During the 12 years spent in public education both Finnish and Hungarian students study fairly many subjects. Among them, several subjects are called similarly but there also exist significant differences. There also are some subjects that cannot be found in the other system. A concept of the respective image of culture conveyed by the two educational systems can be formed by a comparison of the typical subjects and number of lessons in the major school types (cp. Tables 4, 5, and 6). In these tables, the Hungarian data have been arranged according to the Finnish 6 + 3 + 3 school system.

In the interest of assuring inquiry as accurate as possible, let us examine first the limits of subject comparison. The Finnish data have been taken from an official publication entitled Developments in Education.[10] (Minor changes may only occur in the sequence of the subjects.) The Hungarian data have come from a study elaborated on Hungarian education for the OECD (Halász, 1993). It is important to emphasize, however, that an unequivocal and exact description of the system of subjects and weekly lesson hours valid in Hungary is extremely difficult to make, because of several reasons. A significant number of general schools and secondary schools still adopts the slightly modified system of subjects and weekly lesson hours of the curriculum reform of 1978 (the latest centrally initiated curriculum reform). At the same time, another significant number of schools have made - living with their autonomy - minor or major modifications in the system of subjects and the weekly lesson hours. Many schools have introduced innovations in their respective system of subject with the permission of the Ministry. According to the data of a county survey of 1992, 33.8 and 42.1 percent of the general schools and the secondary schools, respectively, introduced such changes in the past five years (Annási, 1992): increased the number of lessons dedicated to foreign languages or included new subjects (e.g., information technology, home economics, ethics, nature and environment protection,

[10] Developments in Education, 1990-1992 Finland, Ministry of Education, 1992. Table 2, p. 25; Table 3, p. 26. Table 4, p. 34.

second and third foreign language) in their respective system of subjects, while other subjects were omitted. Note that there is no exact information on the subjects - and the extent to which they were - omitted. This is the reason why some reviewers describe the internal life of the existing Hungarian school as chaotic. The number of subject variants is further increased by the fact that several schools have joined different movements of alternative pedagogy and adopted their respective programme (e.g., Waldorf school, Freinet school). As a result of all the above, the traditional system of subjects and weekly lesson hours has been put in motion in Hungary, in the wake of the democratic changes and the increase of school autonomy. The former rigid features have disappeared. On the other hand, the directives, related to the subjects and the weekly lesson hours, of the new Education Act adopted in summer of 1993 did not make their effects felt in the examined period. As a result, information can only be given on a typical (or thus conceived) system of subjects and weekly lesson hours, instead of generally valid ones.

It is necessary to note, however, that the Finnish system of subjects - in spite of unequivocal information on it - neither can be considered uniform at the national level. Even in that case, one has to reckon with the autonomous initiatives of schools and minor or major changes made in the system of subjects. In addition, the variety of the elective subjects, in itself, assures a considerable degree of flexibility - especially in upper secondary schools - in the system of subjects. As a result, the system of subjects and the weekly lesson hours of Finnish secondary schools indicate variety within the nationally valid frameworks. Democratic educational systems definitely seem to put up resistance against any effect which would make them rigid. This is the reason why the columns and rows in Tables 4, 5 and 6 give only information - though resulting from different reasons - of the subjects in both educational systems and of the weekly number of lessons assigned to them.

After the above reservations, the major similarities of and differences between the Finnish and Hungarian systems of subjects may be summarized in **six characteristic features**.

1. The **total of time planned** for teaching and learning indicates more or less *identical values* in all of the three school stages, both in Hungary and Finland (Tables 4, 5 and 6). The Finns dedicate less teaching time for the elementary and upper secondary school stages than Hungarians do but the difference is not significant.

2. In **Finnish schools**, definitely *more time* is dedicated to three subject groups than in Hungarian schools. These subjects and subject groups are as follows: **foreign languages, social science** subjects (history, civics, religion or ethics, philosophy, home economics) and **art** (singing/music, drawing/art, handicraft, textile work). On this basis, Finnish schools are characterized by a *humanistic orientation*.

3. In **Hungarian schools**, however, *more time* is dedicated to teaching **mother language** (mother tongue and literature), **sciences** (environment studies, geography, biology, physics, chemistry, technological work), **mathematics**, and **physical training.** Thus, Hungarian schools are rather characterized by an *orientation to realia subjects*. At the same time, the relatively much time dedicated to mother tongue and physical training is an interesting feature characteristic in the Hungarian system of subjects (the more so as the number of lessons dedicated to mother tongue is found too little by rather many in Hungary).

4. The above trend is contradicted by the fact that *Finnish elementary schools (Table 4), dedicate more time to science* - environment study - than Hungarian schools do. The subject is taken up as early as in the first grade and continues to be taught up to the sixth grade as an integrated subject. It is necessary to note here that the Finnish system of subjects is characterized by certain degree of *science integration*: physics and chemistry are taught conjointly, as an almost integrated subject in the lower secondary school (7th to 9th grades) and same is the case with geography and biology in many schools. It also is noteworthy that the Finns also have health education in the upper secondary school.

5. There almost seems to be no subject or subject group to which **identical or nearly identical amount of time** would be dedicated in both countries. There are only three exceptions: foreign language in the elementary school (Table 4), arts and mathematics in the upper secondary school (Table 6). The latter, however, is illusive since the mathematics subject is definitely differentiated in Finnish upper secondary schools ("long" and "short" mathematics curricula).

6. The Finnish system of subjects is characterized by **internal flexibility**, which bears upon the fact that great many choices are possible in the organization of teaching/learning at school. There are several facultative

(elective) subjects, and lower and upper limits are possible in the case of great many subjects. The Hungarian system of subjects is less flexible for the moment, but the trend of change is promising.

CHAPTER 3

MATRICULATION EXAMINATION

The Finnish matriculation examination generates a **strange double feeling** in a foreign contemplator: while some of its elements seem to be irrational and can mainly be explained by certain historical traditions, some of its other components are surprisingly sophisticated. The Finns themselves are also aware of this fact but they tell that the possibilities of improvement are present in the actual system. This is the reason why the Finnish education policy does not envisage any immediate and radical reforms in the matriculation examination, although it is by no means sure that such a move may be avoided (Konttinen, 1993). On the other side, it can be said that the Hungarian matriculation examination needs a prompt and radical change (Báthory, 1992a).

The **method** stands at the positive side of the "double feeling". The Finnish matriculation examination is standardized at its essential points - in the way data are collected and especially in the evaluation of tests - without being over-regulated and extending to all minor details. As a result, the problem, long standing and acute in Hungary, of how the evaluations given by different teachers at different schools could be compared and related to common standards can be regarded as already solved in the Finnish matriculation examination. It does not imply that the quality of standardization might not be constantly developed, because several different concepts in this regard have been introduced. In any case, the theoretical and methodological bases of standardization have been laid down and this is an extremely important lesson for Hungarians. It will be demonstrated that this standardization is neither too complicated nor costly.

The *problematic elements* in the Finnish matriculation examination are mostly of **content** character. Both national languages of Finland, Finnish and Swedish, are given substantial emphasis in the matriculation examination. Further, rather extreme importance is attributed to foreign languages, especially the English language, since neither of the national languages can be regarded as a world-wide language. Thus, however, there hardly remains time and possibility for thorough examinations on social science and natural science subjects. The fact that history is not a separate examination subject in the Finnish matriculation examination will be likely to call forth great consternation among Hungarian intellectuals and historians. (Nevertheless there exists a Finnish national identity!) The content of the matriculation examination, and the ratio and disproportion of the traditional and the modern elements of education conveyed by the matriculation examination gives plenty of headache to Finnish teachers, researcher and the public opinion alike. The Ministry has recently entrusted a team consisting of foreign and domestic scientists with the task of assessing natural science education at universities. In its report, the team has seriously criticised math and natural science education at upper secondary schools and thus, in an implicit way, the matriculation examination, too. (Further details will be given later.)

Finally, it seems inevitably strange and problematic in the Central-European eyes that only a fraction of the large number of students given *vocational training* may take a matriculation examination. Thus, the Finnish matriculation examination is not part of "secondary education" in the same sense the Hungarian one is, but rather in the academic and selective meaning.

3.1 Extension of Upper Secondary Schooling

In reforming the Hungarian matriculation examination, a foremost frame condition will be its extension to masses of upper secondary schooling offering general education. As a matter of fact, at the end of the 20th century and being aware of the international trends, there is no possibility for considering a reformed matriculation examination which would push upper secondary education and, as a consequence, our higher education into an elitist direction - a move to which the former official education policy (till 1994) and some groups of intellectuals feel strong inducement. What is needed is a matriculation examination which allows for a radical increase in the existing narrow

capacity of upper secondary education and an unprejudiced broadening of the basis of selection for university and college education. Finland is a very good example that such a solution is possible.

By the late 1970s, the massive upper secondary education of the 16 to 19 year-old population had already been realized in Finland, similarly to most of the industrialized countries in the world. In recent years, 51 to 56 per cent of the students graduating from the nine-graded basic school have been entering three-graded **upper secondary schools** while another 40 per cent of them have been continuing their respective studies at different vocational schools and institutions of different duration. From the viewpoint of content, the *upper secondary school* (this generic designation nowadays appears in official publications in English rather than the traditional and conceptually specific "gymnasium" - "lyseo" in Finnish) stands closest to the Hungarian four-graded academic secondary school. The critical schooling ratio of 50 per cent had already been reached by the Finnish lyceum by 1978. Finnish upper secondary schooling may be considered **highly developed** from this date on, at least from a quantitative viewpoint.

It is interesting and refers to a public education approach somewhat different from the Hungarian one that while secondary vocational training is extensive and strongly differentiated, its volume is relatively inferior to general education and - as already indicated - only a fraction of the large number of students attending secondary vocational schools may take a matriculation examination. Thus, the matriculation examination is a "house" examination of the lyceum. As a result of all these efforts - according to official statistics - the 26400 students taking the matriculation examination in 1992 represent about 47 percent of the 19-year-olds age group, and some 59 percent of these were females. From the 8 percent in 1950, this indicator has climbed to the present level in an almost linear fashion.

At the same time in Finland, one of the most developed systems of higher education in Europe has been developed in the past two decades, partly as a result of the developments in upper secondary education. The latter having become massive was soon followed by an extension of higher education. More than one third of those taking a matriculation examination are enrolled in universities and in vocational higher education.

The proportion of new students admitted to higher education in 1992 represented 68 percent of those passing the matriculation examination that

same year. To be sure, all of these are not necessarily matriculants of that same year, but the figures demonstrate the general proportion of intake, which is about 1/3 of the corresponding age cohort. The proportion with matriculation background of those starting in vocational *schools* in 1992 was 17 percent, in vocational *institutes* 52 percent, and in vocational *higher education* 73 percent. For vocational schools and institutes in particular, this implies in a sense double education and thus represents a malfunction in the planned system. (Source: Education 1993:7, Statistics Finland.)

With regard to the percentage of those attending higher education from the relevant population and to the number of students in higher education per one hundred thousand inhabitants, **Finland ranks first in Europe** (Table 7).

Even if quality cannot be expressed by quantity and a large quantity always indicates the functioning of an internal system of selection, the achievements of the Finnish higher education are entitled to deserve the attention of both the developed countries and those intending to close up such as Hungary. And such achievements could not have been possible without the upper secondary schooling having been made extended and massive.

As a heritage from the past the same interrelations and data draw a disconsolate picture for Hungary. Only 45 to 50 per cent of the 14 to 18 year-old population attend secondary schools and, in addition, less than half of those students attend academic secondary schools offering general education (Oktatási Statisztika /Educational Statistics/, 1992). Though the ratio of Hungarian students taking a matriculation examination comes close to the Finnish data, this number also includes the matriculation examinations taken at vocational secondary schools. The ratio of enrolment indicates an extremely big difference between the Hungarian academic secondary school students and the students of the Finnish upper secondary school! (Table 8)

Quality of education is the usual defence argument in Hungary against the extension of the academic secondary education. This is a typically conservative idea from the industrial period when an intellectual elite, limited in number, still could manage a country. Though it is obvious that an increase in the enrollment numbers may result in a significant decline of average achievement, this may only happen if the pedagogical culture of schools remains unchanged. The Finnish example has proven - and this is the reason why it is very instructive for Hungary - that opening the doors of secondary

schools wide is **not necessarily the opposite** of educational effectiveness. At least the survey data of international educational assessments indicate the relatively high quality of Finnish public education. (Cf. Robitaille & Garden, 1989; Postlethwaite & Wiley, 1991; Keeves, 1991; Elley, 1992)

In the postindustrial period, the quantity and quality of education appear as a dual requirement. In this regard, it is not an issue of formulating priorities: **quantitative increase and quality should be assured at the same time**. The paradox of quantity and quality may be solved and outdone by changing the pedagogical culture. This is the only possible answer for the social challenges. (It must be mentioned, by the way, that this is the cause of the latest headway of educational research in most of the developed countries.)

Thus, if public education and, within it, the upper secondary education is intended to be democratized and modernized in Hungary, the dilemma is not to make a choice between mass education and education of the élite. Rather, the content, organization and pedagogical culture of the entire upper secondary education should be modernized. And this is the reason why it is advisable to bring about a reform of the matriculation examination together with the reform of upper secondary education.

3.2 Matriculation Examination Subjects

The contents and methods of the matriculation examination generally reveal what is considered the essence of general education in a given society in a given period and, as a consequence, on the knowledge required from those taking an examination. In the Anglo-Saxon tradition, the requirement consists of thorough knowledge of some specific subjects (one may be enrolled to university with three "A" level examinations) while the principle of "a little bit of everything" rather prevails in the countries with a German tradition such as Hungary. This is demonstrated well by the actual subjects of the matriculation examination. In the international matriculation examination, the golden mean is looked for between those two extreme approaches.

A specific solution, originally modelled after the entrance examination of the Helsinki University, the dominant university in the country (though it also was based upon the German tradition) is adopted by the Finnish matriculation examination. The first matriculation examination took place in 1874 (the same in Hungary happened in 1851) and though it has been since modi-

fied several times (mainly from methodological viewpoints) the subjects have hardly been changed.

The existing Finnish matriculation is an external examination consisting of four compulsory and three elective subjects. The maximum number of subjects examined is six per student. On the main, these are taken during a two-week period, and each test allows for a maximum of six hours for the student. The examination subjects are as follows:

Compulsory subjects:
- mother tongue (Finnish or Swedish)
- the other national language (Swedish or Finnish)
- foreign language (mostly English)
- mathematics or realia (depending on courses taken, see below).

Elective (optional) subjects:
- mathematics (compulsory for longer math students, elective for others)
- realia (compulsory for shorter math students, elective for others)
- second foreign language (optional).

Written examination and tests are the exclusive examining methods. Questions requiring short answers, compositions requiring lengthier elucidations, analysis and synthesis (essay), as well as multiple choice tests alternate depending on the character of the given subject and learning aims (Table 9). In the first stage of evaluation, the answers given by students are scored by their teachers. The schools subsequently forward the materials of examination to the Matriculation Examination Board with a nation-wide competence where a second evaluation of the materials is organized on a complete coverage (rather than sample) basis.

In the course of the matriculation examination taken in the four languages (mother tongue, other national language, first and second foreign languages) mostly essays are written by the students. They have to write an essay in the **mother tongue** (this is mostly Finnish) and they may choose any of 14 given titles covering religion, culture, history, society and natural science or personal interests.[11] Actual topics are numerous. Only a few years ago, the students had to write two essays and the one considered to be better by the teacher was forwarded.

[11] See end note at the end of this chapter, page 45.

In the **other national language** (this is mostly Swedish), as well as in the foreign languages, the test consists of a *listening comprehension* part and a *written* part. In general, the examination includes comprehension of oral discourse and written texts, as well as grammatical tests. E.g. in 1990 and 1991, the former included 20 multiple-choice questions and five open-ended items, all in the target language. (Tape recordings are used.) The written part included 30 multiple-choice items and a subtest on structures (in the other domestic language) and 20 multiple-choice items and a 50-item cloze test (in the first foreign language) - in addition the students had to write an essay. As an example of the latter in the English language, the students was to choose from ~~10~~ 5 to ~~15~~ 4 titles or topics.

The decisive majority of those taking the examination in the compulsory foreign language - more than 95 per cent during the past years - take the examination in the **English language**. The others are divided - in a descending order - among German, Russian and French. Among the students taking the examination in the English language, those studying English only beginning with the 7th grade may take an easier examination (1,583 students did so in 1989).

There exist two kinds of **mathematics** matriculation examinations: **advanced and basic level**. The students attending classes with a "long" or "short" mathematics curriculum take an advanced or basic level examination, respectively.[12] The students attending classes with a "long" mathematics curriculum are obliged to choose mathematics as a compulsory subject in the examination, while they may choose the realia only among the elective subjects. Being based on the shorter course, the mathematics examination taken within the elective subjects is easier than the compulsory version. But even this easier examination can be avoided by those studying according to the "short course".

The written examination in mathematics includes ten tasks from the spheres of arithmetics, algebra, geometry, trigonometry, as well as integral and

[12] About one third (30 to 35 per cent) of the total of upper secondary school students study according to the "long" mathematics curriculum, the rest content themselves with "short" mathematics curriculum. The difference is significant: the "long" mathematics curriculum extends to 11 courses which means 4 to 5 mathematics lessons per week through three years. (Each course consists of 36 lessons.) The "short" mathematics curriculum extends only to 6 courses (and the 6th of them even is optional in the third grade) which means less than 3 lessons per week.

differential calculus. The students solve as many as they are able to in the given time (of six hours).

The comprehensive examination subject called **realia** (the English equivalent might be: General Knowledge Test) is a remarkable content feature characteristic of the Finnish matriculation examination. The realia examination subject includes 65 tasks from which the students - depending on their respective interest but also on what and in what depth they have studied at the school - have to choose and solve at least 10 tasks in at least two subject areas. The tasks generally are questions requiring brief elucidation (essay). The students may decide on the spot, after seeing the concrete questions, which tasks to solve. The realia examination subject demonstrates rather well the Finnish attempt made for realizing the principle of "a little bit of everything", or "general liberal education". - The currently offered contents and task structure of the realia domain is as follows:

TABLE 3.1: Task Structure of the Realia Test

Subject area	*Tasks offered* and Number	Percent	*chosen by students* Percent in 1991	Percent in 1993*
Religion, ecclesiastic history, or alternative views of life (for those not belonging to the Lutheran or Orthodox church)	8	12	18.9	17.4
Psychology, philosophy	11	17	15.7	10.1
History, social science, economics	12	18	24.6	15.2
Physics	15	23	9.4	4.9
Chemistry	7	11	5.8	9.0
Biology	7	11	13.3	20.2
Geography	5	8	12.3	23.2

* NOTE: The 1993 figures are based on responses given per question, i.e. accounting for differences in the number of questions in the test. Thus 100 = all responses given. (Source: Natura, N:o 4/1993.)

The students having passed the matriculation examination are given a certificate (Matriculation Board Report Card). A separate (school leaving) certificate summarizes the achievements of the three-year-long upper secondary school studies. In possession of those two certificates (Matriculation Board Report Card and School Report Card) students attain what is called 'general eligibility' for higher education, whereby they may be enrolled in

institutions of higher education, different vocational courses, or simply start to work. For a number of people, the examination represents a (sub) goal in their life-long learning, which has certain value in itself, not necessarily related to more instrumental uses.

It also belongs to the peculiarities of the Finnish matriculation examination that there is a distinction between the "spring" and "autumn" matriculation examinations. The latter represents a second chance and is taken by students intending to improve their respective qualifications given during the "spring" matriculation examination, and particularly those parts in which they failed or were absent for various reasons. Improving the students' final results and, accordingly, their odds for further studies is the main objective of this dual examination. Likewise, the schools provide another opportunity to do so: the marks forthcoming in the School Report Card may still be improved in May, before they are made final. Students sitting for such "upgrading tests" are examined by their own respective teachers at the school. It is an advantage that previously assigned marks cannot be downgraded at this point. The Finns - seemingly - are more eager to see what capacity the students *have*, rather than what they *do not* know. At least this carefully elaborated system for the possibilities of improvement is very much in the individual's interest and an attempt to overcome the vagaries of "once and for all" examinations.

The Finnish matriculation examination is fairly special, in comparison with the examination procedures adopted by other countries. The approach to education, the image of erudition conveyed by the matriculation examination and the different forms of taking care of the legal basic rights of students refer to a rather specific philosophy. This is the reason why the analysis of the Finnish matriculation examination seems to be an exciting and promising task - and not only from a Hungarian viewpoint. In the visiting author's opinion, comparative education seems to have missed the Finnish matriculation examination as a topic of cross-cultural interest.

Six conclusions may be drawn from all the above.

(a) The most striking phenomenon is that the accent is put at **languages** in the Finnish matriculation examination. Each candidate has to take an examination at least in three but may do so even in four languages. At the same time, natural science subjects, history but even mathematics can be avoided.

From the viewpoint of students, the accent put at languages primarily means that those interested in languages are advantaged. It is a very difficult examination for those having difficulties or lack the motivation with learning languages. Of course, it also has to be taken into account that it generally is easier to take an examination in the "soft" languages than in the "hard" natural sciences. Might this be the reason why relatively few students fail the matriculation examinations?

An interesting characteristic of the Finnish and Swedish mother language matriculation examination is that the theses only partly and not overwhelmingly are of a literary history or aesthetics character. Thus, this subject is not a "national spirit" subject, as Hungarian literature is in Hungary, but rather a more general subject of **linguistic communication**. The variety of topics and the preponderance of actual issues, or topics of current debate are related facts. Thus the teaching of mother tongue quite obviously has a function different from the practice in Hungary.

The entire system of the Finnish matriculation examination - the accent put on languages and the dominance of written discourse among the methods - seems to emphasize the importance of well-considered **communication and formal verbality**, to orientate the logic of teaching/learning in that direction. This view seems to be supported by the - even internationally acknowledged - outstanding reading literacy achievement of Finnish students (Elley, 1992; Linnakylä, 1993a; Lundberg & Linnakylä, 1993).

From a viewpoint of educational theory, the function of the **foreign languages** can be easily explained: an attempt made by a small nation on the margin - or rather with a feeling of being left at the margin - for breaking out. The **decisive primacy of the English language** among the foreign languages corresponds to the Nordic model and to the practice commonly adopted by other small West-European nations. The Finns think with reason: this is the way leading to Europe. Why do Hungarians not think likewise? Actually, inadequate resources in Hungary to invest in teaching foreign languages are divided among 3 to 4 foreign languages.

The teaching of the Swedish language at Finnish schools and the compulsory Swedish language matriculation examination is an issue more difficult to explain. The history of the country has been intertwined with the Swedish history for long. Swedish culture has for many centuries been exercising a significant influence: Swedish was the language of the 'civilized' and ruling

class, as well as that of all official government affairs. Teaching took place in Swedish at the first university in Finland (in Turku since 1640) and Swedish was the language of instruction at most secondary schools even in the Russian century.[13] Even to-day there is a tendency for this cultural and language minority to be slightly better off - and thus on the average have an educational advantage - over the bulk of the population.

Presently less than 6 per cent is the proportion of Finnish citizens with Swedish mother tongue, and most of them live in the Southern and South-Western part of the country: in Turku, Helsinki and the "Swedish" areas along the coast. However, both languages can be used in the entire country, thus the officials must be able to manage in both languages reasonably. The use of the Swedish language is prominent in television broadcasts. In the last analysis, the presence of the Swedish language in Finland has already passed the minimum democratic norms by far and with its double system demands lays its burden on various administrative and social services, as well as the system of education. In general, the Finns are aware of the fact that this fine democratic tradition contains some irrational elements and has almost been overdone, but potential revisions in the issue are only discussed with precaution, and even reluctance, while th basic premises are seldom questioned. The language issue has deep cultural roots and implications: it strikes an outsider as a taboo topic which cannot be easily changed.

(b) The Finnish economy, way of life and services correspond to the modern Western level. Finland is a genuine West-European country. What is even more, Finland is among the champion riders in the world in terms of public health, social and cultural indices related to the living standards. One is therefore intrigued and tempted to ask how is it then possible that in such a modern country the **natural science and mathematics studies**, belonging to the bases of modernization, are not given the emphasis, in the curriculum and in the program of the matriculation examination, that would be required by the background sciences of those subjects in the postindustrial period? And most of all, how is it possible that certificates of matriculation examination are available without any examination taken in mathematics and natural sciences?! As a matter of fact, many students manage to go around those two "obstacles", or content themselves with the easier choice:

[13] There are 6 qualification grades in the Finnish matriculation examination: laudatur (excellent), magna cum laude approbatur, cum laude approbatur, lubenter approbatur, approbatur, improbatur (failed).

the basic level mathematics or the biology from the natural sciences. This is the main reason why one may consider the Finnish matriculation examination to be **disproportionate** from the viewpoint of modern education: mathematics and natural sciences, and perhaps other elective subjects as well, are pushed on the margin by the predominance of language teaching.

In the Hungarian secondary education and matriculation examination, the situation is just the opposite: the science side dominates while languages and the humanistic side is relatively neglected. Thus, it also is disproportionate in its own way. Regarding Snow's observation on the existence of two cultures (humanities and scientific-technical), natural sciences would certainly belong to the crucial tasks of general liberal education. This problem of balance has been resolved differently, indeed with reversed values, in the Finnish and the Hungarian secondary education.

The critical analysis and doctoring of the situation has already been started. In 1991, the Finnish Ministry of Education invited a group of experts to evaluate **education in mathematics and natural science** at Finnish universities. Within the framework of that evaluation, several reputed foreign scientists also were requested to participate. The group of experts submitted its report in autumn of 1992 (Higher Education ... 1992).

According to the report, education in mathematics, chemistry and physics is inadequate at upper secondary schools, laboratory facilities and equipment are lacking, or altogether missing, and the students are inadequately motivated for learning. Girls, in general, tend to dislike the study of those subjects, but many boys also fall out. The students themselves are dissatisfied with their respective knowledge. In 1991, only 45 per cent of the graduating secondary school students completed their respective biology and geography studies started at school, and only 19 per cent of them were studying advanced level mathematics, physics and chemistry, and less than 6 per cent of them undertook to answer chemistry items in the matriculation realia examination (See Table 3.1). As a consequence of all the above, student supply is not assured for the universities - as stated by the authors of the study - and there is only a narrow basis for selection. As suggested by the report, studying advanced level mathematics should be made compulsory in the future for those students studying a science subject. It has also been suggested that the realia subjects in the matriculation examination should be divided into two groups: an examination of humanities character and those of science orientation. This would allow - and even invite - certain degree of

specialization in these areas - a feature that is not very noticeable in the Finnish gymnasium, which is working with versatile general knowledge ideals.

(c) From a Hungarian viewpoint, the subject of **history** has a very exceptional status within the Finnish matriculation examination. In spite of the fact that history is taught in 2 and 3 and 2 lessons per week in the three respective grades of the upper secondary school, that subject practically plays a subordinated role in the matriculation examination. Only 12 (18 per cent) of the total of 65 tasks in the realia examination subject contains items of history, social science and economics character. In addition, this relatively small number of tasks not necessarily even focuses purely on history. And as it can be seen in Table 3.1, only one fourth and recently (1993) even less of the total of students participating in the realia examination choose to deal with topics related to history. Thus the majority of the total of upper secondary students may complete the matriculation examination by *not* being examined in history.

Thus, the preponderance of languages in the Finnish matriculation examination afflicts not only the natural science subjects but also the history and social science subjects. Of course, one may argue that the Finns could have chosen the solution of increasing the number of compulsory examination subjects from four to five or six. However, overburdening the students - which obviously would be the result of such a move - would not fit into their philosophy of education.

The central importance of the history subject and the history matriculation examination in Hungary is well known. Together with Hungarian literature, history is considered by many as the essential basis of the "national" culture. As against, as indicated by the experience in Finland, people can be good patriots even without special emphasis put on history, as they do not mix up patriotism and nationalism. One may observe that "Finlandization" did not mean any Finnish denial of the national values either. The patriotic character of the two anti-Soviet wars - the Winter War and the Continuation war has never been denied - those having taken place in World War II. That period is thoroughly discussed by the history textbooks, and the leading personalities - even if their respective activities might have been contradictory, such as in Marshal Mannerheim's case - are well-respected in Finland.

(d) In the Finnish matriculation examination, a **balance is sought between**

compulsory and elective subjects. It results in considerable advantages from the point of view of differential pedagogy: the expectations with regard to general knowledge, and the various interests of students may be harmonized this way. Many different choices are also possible within each subject. For instance, in the subject of the mother tongue, the students are choosing from among 14 titles of great variety for their essays. Usually these set demands on the student's 'maturity' in analyzing even complex issues, presenting supporting evidence and arguments for their viewpoints, etc. In comparison, what a different philosophy is reflected by the 3 to 4 alternatives of the Hungarian written examination - not even mentioning the fact that all of the titles cover topics of literary history or aesthetics only. In addition to the three languages, the practical possibility of making choices prevails even in the fourth compulsory subject (except for those studying the "long" mathematics curriculum). The combinations of elective subjects culminate in the realia examination subject. While the students have to tell in advance which subject they will take of the elective ones, in case of the realia they even may decide on the spot. The latter, of course, is a rather theoretical (although not uncommon) case since the preparation for the examination is likely to drive students towards certain emphases, and thus to a kind of selection. However, this is a case demonstrating the rather less specialized nature of studies in the Finnish academic secondary school.

(e) The predominance of **written examinations** is a characteristic feature of the Finnish matriculation examination. These are mostly of the essay type. Oral or listening tests are seldom used and then almost exclusively in foreign language examinations, or in the school-based part of the leaving certificate. Multiple choice tests are adopted for examining grammatical knowledge and comprehension of oral texts. When the Hungarian author put the question whether the lack of oral examinations impedes the improvement of the ability of speaking (as formulated by the usual Hungarian objection), one of the interviewers - principal of an upper secondary school - quite simply answered: plenty of opportunities are given for the improvement of phrasing during the school years.

(f) **Central guiding principles** prevail and are given in detail in the organization of the Finnish matriculation examination and in the evaluation of the written answers given by the students. In addition, a system of **moderation**, or double marking, is effected to reduce the relativism and subjectivism of the teacher's evaluation. As a result, there are good chances that the evaluations given by different teachers at different schools might be equivalent and that

the eventual results are comparable. Thus, the Finnish matriculation examination - as opposed to the existing Hungarian practice - is a highly **standardized examination**, with the same substance and organization for all. This is one of its most attractive characteristics from the viewpoint of the Hungarian reform efforts. This is the reason why the next subchapter is to examine the methodology: the issues related to the organization, arrangement and evaluation of the examination.

3.3 Organization of the Matriculation Examination

Here, the arrangement of the Finnish matriculation examination is traced from the set-up of the **Matriculation Examination Board** to the distribution of the **Matriculation Board Report Cards**.

Each year, the Minister of Education requests the Matriculation Examination Board to organize the content of the matriculation examination and to evaluate students' achievement. On a yearly basis, 30 to 35 persons are invited to the Board, and changes in the membership rarely occur. The matriculation examination is kept in hands by a team well welded together. Its composition also indicates intensity: the Matriculation Examination Board consists half-and-half of subject methodologists coming from the Helsinki University and specialized head-inspectors from the National Board of Education. In addition, researchers may also be invited on occasions. (Thus in 1992, two persons were members and took part in the activities from the Institute for Educational Research of the University of Jyväskylä.) The Matriculation Examination Board is assisted by a secretariat consisting of 5 to 6 employees.

The Matriculation Examination Board is divided into smaller teams according to the compulsory and optional subjects. In general, 3 to 4 persons work in each subject committee: they decide upon the topics and titles of the written examinations (essays, brief questions) to take in the given subject. Secrecy and confidentiality are important conditions of functioning. Any precedential leaks would be blames falling on the subject committees. Secrecy and confidence precede even the professional viewpoints. This explains why there is no preliminary testing, which fact rather diminishes the professional-technical value of the examinations. Experts in psychometry and evaluation have no role with the Matriculation Examination Board. This may also be attributed to the overall secrecy and to the strength of traditions. There exist no subject

item banks; schools are free to utilize the tasks used during former examinations for practising and training, and they often do so. A regular research and development component related to this examination is thus neglected. (However, subsequent reliability calculations are sometimes made with regard to some subtests, such as those of foreign languages.) Descriptive statistics - e.g., how many students have chosen a particular task - are given by the department of statistics in the Ministry.

Students have to pay a registration fee (100 Finnish Marks plus an additional sum depending on the number of examinations to take in different subjects). All operating and scoring costs of the Matriculation Examination Board are covered from these fees; no separate budgetary source is at disposal.

The Matriculation Examination Board sends the examination questions and titles in sealed envelopes to the schools for a preset date of the examinations to take place at the schools. There have not yet been suggestions to supersede this "envelope" method by some other, perhaps more advanced method, e.g. announcements on radio or television.

Organizing the matriculation examination is the task of schools; the practice of sending independent presiding examiners (invigilators) for the examination - as usual in Hungary - is unknown in Finland. Yet, the organizational work is taken very formally and seriously, much care is devoted to it and all of the details are elaborated carefully, according to the letter and purpose.

At the third and final grade of upper secondary schools the school year concludes in mid-February. This is the time for the graduating students to say goodbye to their regular school-work, which generally means a great merry-making: singing and shouting students stroll about the town by car or foot, throwing candies to the town people watching them. They may also take a drink or few. The group pictures with the students in holiday cloths - the boys often wearing the traditional stove-pipe hat - standing in the school-yard are taken in these days, according to the traditions. The entire society is thus made aware of the conclusion of teaching and the approaching matriculation examination. This may be considered part of the few existing rites of passage to adulthood in a society in which few ceremonial practices prevail.

From mid-February to early mid-April, preparatory work for the examinations is organized by the schools. Studying, recapitulation and trial examinations are performed in small groups. It is taken very seriously by the students since

this is the major opportunity for considering their respective choice and for deepening knowledge in the chosen subjects. Assuming new responsibility for their studies, students themselves become important agents in planning and organizing such schedules of testing and revision, with which their teachers comply.

The examinations themselves take place in early or mid-April, at the same time (that is: on the same hour and day) in the entire country. One examination extends for a continuous 6 hours, from 9 a.m. to 3 p.m. Strict prescriptions regulate seating and other technicalities of testing, as well as intermissions (there are no intermissions, except in need). Subject examinations succeed one another every two days (one day off between examinations). The examination period extends to two weeks. Thus, most students - those taking five or six examinations - get over the torture in two weeks. With this, the external matriculation examination is concluded for the part of the student. In the first half of May, the graduating students still may go up for taking school examinations in order to improve their marks in the School Report Card. Subsequently, there may be private preparatory courses organized for those intending to continue their studies at such universities/faculties requiring an entrance examination. The Matriculation Board Report Cards and the School Report Cards are issued and ceremonially distributed at the end of the regular school term in late May or early June.[14]

After the matriculation examinations in different subjects are concluded in the school, the student's performance is assessed by the relevant school teachers. Each examination subject is given a total score. (In other words, there is no differentiated or analytic evaluation profile, although the test responses are separately assessed and the particular points affecting the ratings are marked.) This evaluation, however, only represents a 'proforma' rating: the final judgement is made by the (national) Matriculation Examination Board, on the basis of their review. In so doing, The Matriculation Board also observes the national distributions as a normative guide and adjusts its final ratings accordingly. This is done to make their assessments better comparable across different examinations and years. The above procedure implies that members of the Matriculation Examination Board **re-evaluate all of the essays and other responses**. This work is done by specially trained subject teachers called censors. E.g., the English foreign language committee employs 40 censors. In case of minor differences in the respective evaluations given by the teacher and the censor, the evaluation given by the censor is final, but in case of a critical difference between those

two, the decision is referred to a third evaluating person. - The student's Report Card is always signed by the president of the Matriculation Examination Board.

Considering the approximately 30,000 students taking examinations each year, it may be easily recognized that the members of the Board, together with the censors, perform a rather massive and responsible work. And they have to accomplish this work in a short period of one and a half months (from mid-April to the end of May).

As mentioned earlier, the Finnish matriculation examination involves two opportunities: the spring (February-June) examination, as well as the autumn (October) examination which serves the purpose of a second chance, increasing the individual's prospects for fair assessment. The latter may be applied for by those taking the spring examination but also by those having taken the matriculation examination earlier. About 5 per cent of those taking the spring examination usually avail the opportunity to improve their weak, notably failing respective scores. There is only one chance given to repeat an approved/passed test. Thus, the Matriculation Examination Board has not much time to rest on its laurels, since preparations for the autumn examinations start in the summer. And after that, the entire process is started again from the very beginning - albeit for considerably smaller group of participants.

Possession of the Matriculation Board Report Card and the School Report Card enables the students to apply for further studies in higher education, i.e. at universities and colleges. However, they may also - and often do - enter institutions of secondary or tertiary vocational training, and some of them naturally may choose to go to work, too. The Matriculation Board Report Card serves not only as a general "passport" but also as a specific "visa" for great many - although not all - university faculties. The better the scores in the Matriculation Board Report Card and the better it complies with the particular requirements of the field chosen, the better of course the chances are for the student to be enrolled. Most universities, however, organize separate entrance examinations, especially for the most popular faculties, or the ones setting high-pitched academic standards.

One might think that from the point of organisation and methods the Finnish matriculation examination is remotely similar to the Hungarian one. To think so, however, would be a rather superficial interpretation since very

significant differences may be detected. Let us identify those differences in methodology and organization, as follows:

(a) The first fact striking the eye is that significant amount of **time and energy** is devoted at schools in Finland to preparing and training students, to revising and reconsidering the quality of studies pursued in the entire twelve years of their schooling. Adequate time is given for doing the examinations, with one day of intermission always assured for switching over. As compared to that, the matriculation examination in Hungary seems to be hasty: the written part takes three consecutive days (one subject per day), while the oral examinations (in two to four subjects, as depends) are confined to one session.

(b) The formal and **standardized inquiry** creates a basis for school accountability, the centrally elaborated questions and titles, as well as the system of double scoring are designed for diminishing the unavoidable relativity and subjectivism of the evaluations given by teachers. Teachers have no opportunity for putting questions, giving hints to or helping students, even if their personal competence as a teacher is indirectly at stake. This procedure is not at all standardized in Hungary.

(c) The **examinations taken in writing** also serves the purpose of objective examining by providing a formal record of performance. In the (external) matriculation examination itself, there are no oral testing sessions as understood in the classical sense - only the listening tests in foreign languages may be perceived as such. At the same time, the play at committees (president, examination committee, secretary), this evil in the Hungarian matriculation examination, is made superfluous by written examinations.

(d) From the viewpoint of methodology, the hierarchically constructed **double system of marking & assessment** is perhaps the most progressive element in the Finnish matriculation examination, taken from the technical as well as civil rights' point-of-view. This method further diminishes subjectivism and, at the same time, does not exclude teachers from the evaluation. They may directly study the products of their own students and draw conclusions related to their own teaching activities (evaluation as feed-back). In addition, the double procedure may also have a strong influence on the secondary school teachers' everyday activities and personal skills related to evaluation. (Eventually, most of the censors are experienced teachers who do not have a

personal stake in the procedure.)

(e) Finally, from a psychological and justice viewpoint, it may be worth emphasizing that **opportunities for improving scores** are built both into the matriculation examination (cf. spring and autumn turns) and the accompanying school reports. This probably diminishes the existing stakes of examining as a one-time affair and loosens the frustrating effects of examination (vulnerable to accidental circumstances, such as illness).

From a Hungarian viewpoint, the methodological lessons of the Finnish matriculation examination could be summarized in the five features above. At the same time, several possibilities for improvement, requiring no essential changes, are hidden in the Finnish matriculation examination. This system is capable for more than it actually shows. The enumeration of such additional capabilities is not so much meant to criticise the Finnish matriculation examination, but rather to indicate the issues deserving attention if Hungary were to reform her own matriculation examination. The following issues are worth mentioning:

(a) The narrow content and total centralization of inquiry has a negative influence on the development of independent and individual school characteristics, and eventually on the school programme. A paradoxical situation arises, namely that a "strong" or "high stakes" examination - and the Finnish matriculation examination is such - **exercises an equalizing effect on the school processes**, instead of promoting their differentiation and individual profilation. This contradiction might only be solved by extending students' choice to more subjects (primarily elective ones) than at present, and to different levels of requirement (as actually in mathematics) in the case of major subjects. Untill recently, the equalizing effect prevails exceedingly prominent in Finland. As one member of the Matriculation Examination Board said, the schools often object to this effect - with not much success, he added.

(b) It is remarkable in the Finnish system that the **questions** (general and integrated topics, titles) stand in the foreground of examining instead of the **curriculum objectives**. Thus, preparation of the students is focused on a pre-conceived system of attainments - which is not exactly known but can be generally inferred from the former examination questions - instead of curriculum-defined student abilities to develop or improve. The sketchy character of these "maturity" requirements has a confusing effect on school

autonomy, too, as the schools and teachers are left mostly with this "realistic" criterion of learning objectives.

(c) However advantageous the centralization and standardization of **inquiry** may be, from a viewpoint of methodology, "inquiry" has been relatively undeveloped and by far **inferior to its own possibilities**. The achievements of psychometry and educational evaluation methods have not been adopted - e.g. there are no pre-testing strategies nor subject item banks, and the issue of proving the validity of the questions has so far not been resolved. It would seem that educational researchers might tease out a lot of interesting information from a well-organized and open data set which is regularly compiled at considerable cost and effort and which quite obviously is of high quality.

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Does there exist any optimum matriculation examination? There hardly does, as indicated by international and domestic experience. Yet, when a reform of the matriculation examination is actually considered in Hungary, the Finnish matriculation examination - with its own traditions and contradictions, its positive and negative traits - may offer good hints and approaches.

Note

As an example, in the **mother tongue matriculation examination** of spring 1992, the (Finnish and Swedish) students could choose one of the titles offered below, with six hours time to write their essay:

1. God speaks in different ways.
2. Why do I need mathematics?
3. Here is a brief description of different role games (annexed). Choose any of the topics and write about the role games:
   - The role games.
   - The fascinating world of role games.
   - The thrill of the role game.
4. The buildings speak of my domestic environment; or: The buildings speak of my environment in summer holidays.
5. Suggest a book for literature teaching.
6. Do the genes determine my fate?
7. Write about what you consider physically exhausting conditioning or exercising.

8. My favourite garments during the years.
9. "We are like swallows, we build a nest", as sung in the operetta. Finding a partner and founding a family is really so easy? (Give your own title.)
10. It is told that the 1990s are like a waiting-room. Mankind is always travelling from one place to another. Where from and where to? (Give your own title.)
11. Who is poor in Finland?
12. A place for nature-lovers to explore.
13. Analyze the topic of different holidays (holy days) and the ways of celebrating them. Title: How holidays are celebrated in Finland?
14. Is it art or is it not?

Each of these products are then scored with criteria of content, structure, language, expression, etc. for a total grading. This is done first at the school, then moderated centrally by a national group of scorers.

CHAPTER 4

EFFECTIVENESS OF THE RESPECTIVE SYSTEMS OF EDUCATION

4.1 Background

It is to be noted that system-level research in education in any country is quite young. The reasons are manifold, not least associated with the recent development of technologies which allow world-wide communication by telephonic and electronic means, or enable personal contacts in the form of meetings, negotiations, or straightforward brainstorming sessions. Technological advances are necessary also for handling the extensive data-bases which inevitably are the result of system-wide studies. The more ideological and cultural reasons behind multi-national cooperative efforts, which underlie modern comparative study, arise from the general post-war atmosphere of new internationalism. This includes such elements as cultural and scientific exchange - even competition - in several fields, the widening of tourism and trade, and not least an increasing exchange of students, which has rather straightforward consequences for the comparison of credits and standards world wide. Thus the emerging interest in comparative problems in education are a rather natural outgrowth of human curiosity, practical necessity, and new technical possibilities. - It is against such background that one may view also the kind of cooperative scientific efforts which characterize the work and interests of the IEA[15], the principal agent which has been conducting system-level studies in education. (See e.g. Hayes, 1993; Husén & Kogan, 1984; De Landsheere, 1988; Marklund & Keeves, 1988; Anderson & Rosier, 1988, etc.)

[15] IEA = The International Association for the Evaluation of Educational Achievement.

For both Hungary and Finland, this has meant the first opportunity to engage in large-scale studies of schooling. What started in the 1950s as a rather modest exploration of possibilities for comparing the qualitative (learning) outcomes of education by using common achievement tests, has evolved into a prominent tradition within the social sciences, in which the interests are directed not only to achievement outcomes, but also their antecedent conditions in the school, the home, and the community at large. In so doing, the main perspective has been that of **entire age groups**, whose educational environments and results are mapped and conclusions are drawn. This is done with regard to individuals, curricula, and the society, in terms of the prevailing structural, attitudinal and processual conditions conducive to various quality levels of learning. While this is accomplished as parallel replications in several educational systems at the same time and with the same (or at least roughly comparable) instruments, such multi-national studies have developed the empirical approach within comparative education. Furthermore, by virtue of its history of repeat studies and "bridge" variables, it is possible to make use of some quasi-longitudinal data derived from several IEA studies over the years.

In the following, an overview of the IEA studies common to Hungary and Finland are presented. Since the number of participating systems varies from one study to another, it is advantageous to use indices which are not crucially dependent on this feature. Therefore, Figure 4.1 presents the results in the form of **z-scores**, which are so calculated that the scores are standardized across all the countries/systems participating in the said study. The standardization procedure essentially adjusts the international average score to zero, and the standard deviation of the country scores to one, which thus becomes the unit of measurement. Very generally stated, all the possible scores in the population (of educational systems, in this case) should fall between the values from -3.0 to +3.0. This method of presentation makes it relatively easy to see a country's placement in terms of the international average, as well as the relative strength of its performance. In all events, however, the indices are open to fluctuations in the actual form of distributions. This is why the maximum and minimum values of extreme cases (which are also presented in the Figure) are not exactly the same across studies. - It is also to be noted that indeed **all** the participating countries have been included in these indices, the reasoning being our willingness to have an idea of a rather full range of educational systems in the world, rather than confining the scrutiny to a selected set (such as the industrialized nations only). One may note that there are other qualifying aspects besides

that of affluency, which might have an effect on these outcomes. For instance, a determinant of the average achievement level attained by a system might be the proportion of the relevant age group concerned, another qualifier being the within-country distribution of scores, an so on.

It is to be noted that not all IEA studies are amenable to a meaningful comparison of scores or subscores. A case in point can be found in the Study of Written Composition, which did not even aim to produce scores for quantitative comparison. It might also be mentioned that - in order to avoid what might amount to unjust parallels - even the Second Mathematics Study did not publish total scores, but instead presented subscore profiles which more closely follow the varying curriculum emphases. The present authors have, however, calculated total scores for these and are fully aware that the resulting indices created in such a way are only very rough and general estimates of 'national' mathematics performance.

Both educational systems are characterized by highly developed and continuously functioning educational assessment mechanisms. Both in Finland and Hungary, there has developed a system of national surveys and for more than two decades, both countries have been participating systematically in the educational surveys and assessments organized by the IEA. (More details on the educational assessment mechanisms of both countries will be given in Chapter 5.) The Finnish Institute for Educational Research joined the IEA in 1962 while the Hungarian National Institute of Education did so in 1968. In the past twenty-five years, respective students and schools of both countries happened to take part in IEA surveys on **five common occasions:** (See Table 10; Chart 4.1.) First Science (1970), Reading Comprehension (1970), Second Mathematics (SIMSS, 1980-82), Second Science (SISS, 1983-84), and Reading Literacy (1991). Due to this fortunate coincidence, not only a descriptive analysis of the two educational system can be made but also the students' achievements - and indirectly even the effectiveness of both systems - may be compared and analyzed.

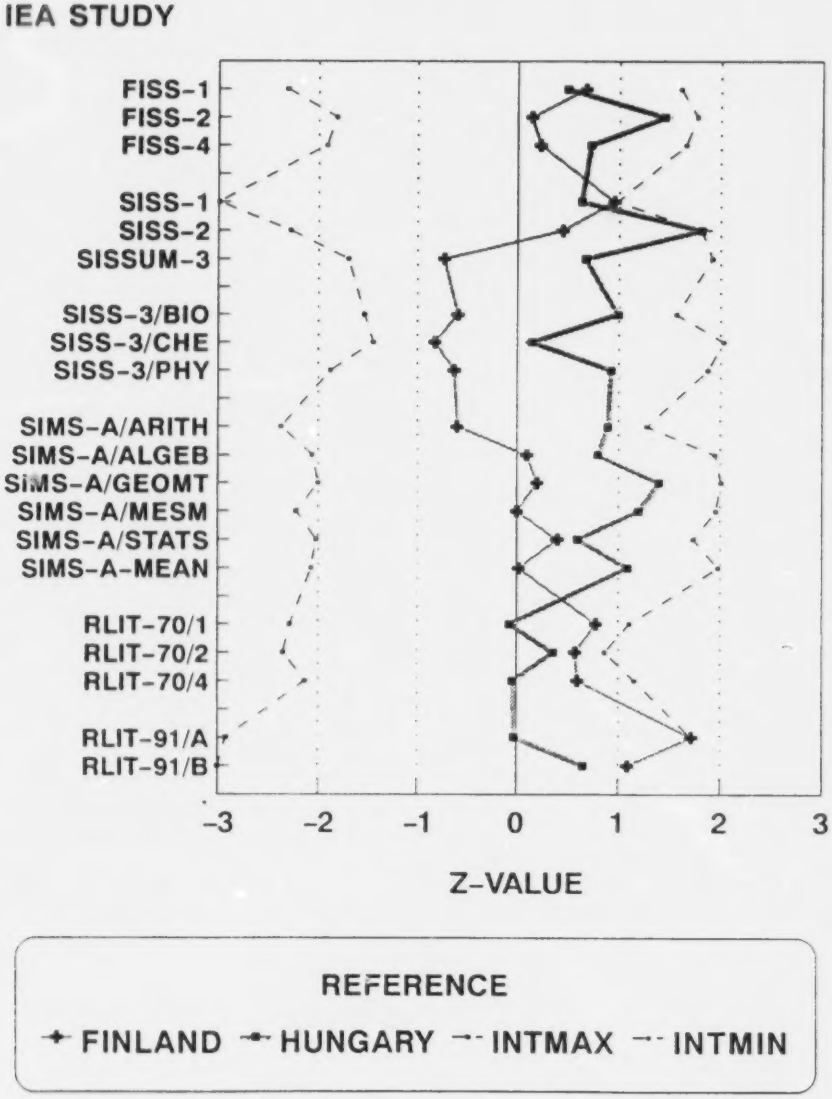
The general objective of international educational surveys of IEA type is to determine and compare the respective educational achievements of students in similar populations and school grades at approximately the same age, but attending schools in different countries (regions); an indirect objective is to analyze the correlations between the various characteristics and functions of educational systems and the educational achievements - in the particular educational fields selected for assessment. As a result of the surveys, one can

determine, on the one hand, the **achievement profile** characterizing different educational systems (the features in which they seem effective or ineffective) and, on the other hand, the character and measure of the **differences** between the respective achievement profiles of different educational systems. An analysis of these differences may often be considered the measure and the ways in which the philosophy, the content and organization characterizing different education systems affect educational systems and their resulting achievements, or the way in which those indicators are reflected in the achievements. We believe that mostly this feature, comprising surplus information, makes empirical comparative studies so interesting for educational researchers nowadays.

International surveys presume highly disciplined research methods and strict compliance with the collectively developed procedures of these studies. It can be said, in general, that a fairly high reliability standard has been attained in the IEA surveys. Presentation of their results extends from relatively simple descriptive analyses to multivariate statistical analyses pointing out causal relations, as well. Thus, many of IEA's international analyses are quite complicated and require a fair amount of technical sophistication from the reader.

The next subchapter describes first the achievement profile of the Hungarian system of education. In addition to the five IEA surveys, findings of national surveys and other international examinations also will be utilized in this description. This will be followed by a description of the achievement profile of the Finnish system of education. Finally - as a conclusion - both examined systems will be compared along five parameters (Leimu, 1992; Báthory, 1992b).

Chart 4.1: OVERALL z-SCORE COMPARISONS
IEA Results common to Finland and Hungary



4.2 Achievement Profile of the Hungarian System of Education

4.2.1. The first feature indicated by the international comparison is that the achievements of Hungarian schools and students are, in several fields, superior to the respective educational achievements of most rich and industrialized countries. This is the reason why the conclusion cannot be evaded: **the effectiveness of Hungarian education is higher than could be expected on the basis of the economic situation in the country and the standard of living of the population**. This rather paradoxical conclusion can be explained by three reasons:

(a) Many people in Hungary believe that **cultural heritage** can counterbalance, to a certain degree, the insufficient economic bases. According to this view, the one-time high prestige of knowledge and schooling in Hungary, as well as the important role played by education in social mobility in the years after World War II adequately explains why some priority fields in Hungarian public education could become developed in the 1970s and 1980s. (However, it also has to be taken into consideration that the cultural and educational traditions will not be able to steadily counterbalance the constant deterioration of the economic situation - including the decreasing sums allocated to education - which may result in rapidly decreasing achievements in public education.)

(b) There are serious arguments to be considered that strongly **centralized** and autocratically administered systems of public education are, in general, more successful in the "hard" achievement indicators which can be measured with tests, than decentralized and democratic systems are. Such a conclusion seems to be supported by the achievements - similar, in many regards, to the state party period of Hungarian public education - of the respective systems of education of Japan and the Asian "Little Tigers."

(c) Finally, it also is an important feature that beyond a certain threshold level of economic development, **no correlation can be detected between the economic potential and the effectiveness of education**. This feature was indicated first by several IEA theoreticians on the basis of the data of the Six Subject Study of 1970-71 (Passow et al., 1976).[16] In this connection, it

[16] According to another conclusion made by Passow et al., it is not fair nor posible to compare the educational effectiveness of developing countries with that of developed countries.

must be noted that the correlation was weakened particularly by the richest country (United States) and by the poorest of the developed IEA countries (Hungary). The public education of the United States proved to indicate low effectiveness. The lack or weakness of this correlation may serve as an explanation for understanding the Hungarian situation which seems exceptional.

4.2.2. In Hungary, the **achievement profile of education indicates rather distinct differences**: while the educational achievements of Hungarian students are higher than the average (of IEA countries) in the fields of science and mathematics, their achievements are weaker than the average in reading (and presumably in the communication skills).

This conclusion is also supported by national surveys. The great and characteristic difference between the educational fields probably has to do with the fact that in the past forty years, the sphere of realia subjects enjoyed priority - for reasons related to politics and modernization - compared to the humanistic sphere, which was manifested in the financial support allocated to the different fields of education, in the emphasis given to different subjects, and in the time allocated to teaching.

4.2.3. International and national reading surveys, performed beginning with 1970, definitely indicate that **reading is one of the neuralgic points in Hungarian general school education**. Some 40 per cent of the students graduating from the general school are able to read in such a way that they not only understand but are even able to interpret texts adequate to their age. At the same time, some 20 per cent of the 14 year-old students are unable to read on the level absolutely necessary for autonomous learning. These students - especially those in the concluding grades of general schools and at trade schools - struggle with serious study problems when they have to use printed text in learning (Kádárné, 1983). A significant number of students are unable to fathom the deeper strata of printed texts. They are the ones who, sooner or later, become functional illiterates. As a consequence, the problem lies not with the starting period and method of teaching to read but rather with the educational practice which does not consider it as a continuous task worthy of a curriculum.

In the latest twenty years, serious efforts were made in the interest of improving the mother language culture and the reading skills (the communication skills, in general). Several programmes for teaching how to read have

spread and this issue has been put into the foreground of social interest. Perhaps this is the reason why the latest IEA Reading Literacy Survey (1991) already indicated some improvement, especially in the case of students in the 8th grade, the most critical one (Elley, 1992). [This observation, by the way, demonstrates the value of sustained evaluation interest, and of repeat studies of achievement.]

4.2.4. According to unequivocal findings of international and national surveys, **mathematics and science subjects are the "pulling" branches in Hungarian public education**. Mathematics surveys were performed in 1980-81 and 1991, within IEA and IAEP[17] framework, respectively. The period of the first survey coincided with the reform of mathematics teaching (1975-85) when Hungarian education gradually switched over from the traditional teaching of mathematics and geometry to the introduction of complex mathematics. Researchers have also proven - among others - that the eighth-graders studying a kind of provisional mathematics curriculum performed significantly better, in every math topics surveyed, than their peers still studying the traditional mathematics curriculum. (The "provisional" curriculum still was a transitory curriculum, containing both traditional and complex math topics.)

Science (physics, chemistry, biology, natural geography) education was surveyed by IEA in 1970 and 1983, completed by the IAEP survey of 1991. All of the three surveys have indicated that the knowledge of Hungarian students can be termed good or even excellent. This conclusion is especially valid for students attending the 8th grade (Population 2) whose average achievement ranked after that of Japanese students in 1970 and proved to be the best in 1983.

Science education appeared in a remarkable degree in school curricula, in the educated world, beginning with the early 1900s. Subsequent to World War II, the presence of science subjects in schools and curricula have been increasing world-wide. The modern approach to science appeared in Hungarian curricula with some delay, beginning with the late 1940s. From that period, the positions of "classic" and "humanistic" education have been repressed. The strengthening of science education was everywhere a concomitant of the

[17] International Assessment of Educational Progress, the international branch of National Assessment of Educational Process (NAEP) supported by the Educational Testing Service (Princeton, United States).

spread of the "materialist" and "evolutionist" approach. In addition, in Hungary - and in the East-European region - it also was given a political overtone: according to the official reasoning, the "building of socialism" required a high level of scientific and technological education and culture. That political priority, as it is well-known, appeared primarily in the number of lessons allocated to science education. In the curriculum of 1978, the number of lessons to allocate to science subjects varied between 10 and 20 per cent of the total of lessons in the 1st to 12th grades, but it amounted to 21.8 per cent in the 8th grade, the most important grade from the viewpoint of public education! It is heartening, however, that a significant number of Hungarian scientists indicated great interest in the world of schools, in teaching science and mathematics. As a result, significant reforms and innovations of subject pedagogy occurred in the past period, especially in its concluding two decades. The standard of mathematics and science textbooks was, in general, superior to that of textbooks of other subjects.

The achievements in IEA surveys are supported by other indications, too. The participation of Hungarian secondary school students in mathematics, physics and chemistry olympiads can be termed excellent in the past few years. György Marx (1991) has also published proof, originating from a foreign source, that the number of publications in science is relatively high in Hungary, their rate is characteristic to the most developed countries. Whence he has concluded that in the past forty years, great many talented people chose science in order to avoid the over-ideologized humanistic sphere. Thus, the staff of talented people has excessively increased in science in Hungary. Now, the task to solve of Hungarian public education is: how this advantageous situation could be maintained and harmonized with the justifiable requirements of the humanistic and language sphere.

4.2.5. Empirical surveys definitely indicate that the **differences between schools and classes are large** in Hungary. This statement applies especially to lower grade classes of general school, in the case of which the index number of the between-school difference is significantly higher than the average of developed IEA countries, as proven by several IEA surveys. The between-school differences indicate an increasing tendency - in certain achievements - at least such a phenomenon is referred to by the results gained from the SISS of IEA.

The mathematics part of the Monitor survey of 1986 indicated the size of the differences between Hungarian general schools and the permanent nature of

these differences. On the basis of the mathematics achievements of students attending the 4th and 8th grades, the researchers have come to the conclusion that between-school and between-class differences are similarly large in both populations and the class means indicate normal distribution (Hajdu, 1989). As a consequence, the between-school and between-class differences develop right at the start of schooling - which finding is also supported by international surveys - and seldom change in the subsequent period.

The size of the between-school differences also indicates that the slogan of the party state of equal opportunities, has ended in total failure. It is worthy of attention, however, that factual results have been achieved in the North-European countries where realization of equal opportunities was taken seriously.

4.2.6. In the educational surveys of the past two decades, the character and reasons of **between-student and between-school differences** were analyzed especially along three variables: the students' sex (differences between boys and girls), the parents' socio-economic status (expressed in the level of education of parents), and the settlement of the school (urban-rural difference).

Difference between boys and girls. Three general conclusions have been drawn from science surveys: (a) Boys are more effective than girls in every science subject and in every cognitive aspect (operation) of learning science; (b) The boys' "advantage" is increasing parallel with the progress in the system of schooling; (c) The difference between boys and girls is relatively less significant in biology, some more significant in chemistry, but extremely significant in physics. Thus, physics definitely is a "boyish" subject. (Cf. p.60.) In the Hungarian system of schooling, the values of the difference between boys and girls are characteristically lower than in the case of most of the developed IEA countries. Similar conclusion were formulated in the other two science surveys, as well. Thus clearly, here is an area of relatively more success.

The tables are turned for the benefit of girls in reading. As determined by the researchers in the survey of 1991, girls read better than boys in the population of 9 year-old in every IEA country, and in the population of 14 year-old in almost every IEA country. Also according to the Monitor '86 survey, girls read better in every population and text type examined, but the differences are insignificant though they seem to be constant.

Parents' level of education. Almost every educational survey performed so far has definitely indicated that the socio-economic status of the student's family definitely influences the student's achievements at school. When the parents' level of education is chosen to approach this complex variable, it can be experienced that children of parents with a high level of education statistically have better achievements than children of parents with a low level of education. However, it is an important feature that **the family effect is subject-specific**, that is the strength of the effect varies depending on the content of the subject. It has been proven, e.g., that the effect is relatively stronger in the case of reading, relatively weaker in the case of mathematics, while it is moderate in science achievements. (Cf. also Charts 4.2.)

Urban-rural difference. It can be stated that, independent of the kind of achievement and the type of school, the students' achievement means indicate, in a very coherent way, a decreasing tendency in the descending order as follows: big city (capital) - town - village.

The character and size of the between-school difference correlates with the character and size of between-student differences. In other words, schools are unable to homogenize differences with pedagogical means. All these findings may be related to the **extreme sociological stratification of the Hungarian society**. This determination proved to be extremely strong in the past decades and never could be comprehended by the "uniforming" education policy: the attention was called to that feature in vain, the education policy did not even try to draw the conclusions necessary. As can be seen from Charts 4.2, there has been some positive development in Hungary regarding selectivity into academic secondary education, which is related to father's level of education. However, the underlying processes are not well understood even today.

4.3 Achievement Profile of the Finnish System of Education

4.3.1 Equity issues in Finland

In terms of surface area, Finland is the fifth largest country in Europe, while her population (of 5 mill.) is among the smallest. This implies a rather small average density of the population. However, since Finland stands her back against the arctic, while the Southern regions are more favourable for agriculture and also urban living, the result is an uneven spread of the premises

and preconditions for prosperous and comfortable living. Consequently, also there is an unbalanced distribution of livelihood, population, and services. This ('remoteness') provides one basis for inequities, which has been acknowledged and for which certain conscious counter-measures have been designed. These include, for instance the classification of municipalities according to their economic capacity, resulting in compensatory state support measures. Such concern has been evident also in education. For instance, the comprehensive school reform (beginning in 1972) was initiated starting from the disadvantaged regions in the North and proceeded towards the South. This brought the social advantages involved within reach of these more remote areas much earlier than the more affluent regions. - By and large, equity issues such as these are sensitive and important. The following are typical examples of related indicators.

4.3.2 Roh : Differences between schools

The ROH is an index associated with the ratio of the between group (school) variance to the overall total (between student) variance. A small value of roh indicates that the component of achievement variance related to differences between schools is small, in comparison with differences within schools (usually: between classes within schools). A large value for roh is associated with large differences between schools. Thus, small values of roh may be taken as an indication of certain homogeneity in the quality of instruction received across the group of schools in question, and may thus be considered as an index of equity. Namely, it can be maintained that in such a case it makes little difference for achievement, which school a student attends. This is often (but not always) part of a deliberate educational policy. (See Postlethwaite & Wiley, 1992, 56-) - At the same time, it should be noted that the index also has certain complex relationships with the way the actual sampling is done. (See Keeves, 1992, 191-; OECD: Education at a Glance, 1993, 158, 165, 171, 250-251.)

From various IEA results it can be concluded that there are actually groups of countries where the size of roh is typically and consistently of a certain magnitude. In a number of studies it has been established that there seems to be a "Nordic group" of systems (SWEden, NORway, FINland, but also including Japan), where the roh is typically around .05, and only 'accidentally' beyond .10. (For Finland this occurs in chemistry and physics at the pre-university level.) There is also a 'middle group' (roughly between roh .15 - .20) to which also Hungary belongs. It is possible that in these countries the

geographic and socio-economic differences are not so distinct as to alert educational policies to any emphatic attention and measures aimed at compensating for such differences. On the other hand, differences between schools may be something that the society actually tries to foster, due to several historical, cultural, and perhaps economic reasons. This index may acquire other meanings for schooling towards the end of general education. In particular (and again depending on the sampling design!), it may reveal trends of *specialization* within the subject concerned. (General changes of the pattern may be observed: in some rather 'equitable' systems, the roh suddenly jumps up, indicating specialized roles in different subject areas.)

4.3.3 Differences between regions

This is a topic which has not received much attention in the IEA international reports. Since the matter is relevant in Finland, the Finnish sampling designs have traditionally used some kind of stratifications related to regions and/or urbanity. In the Second Science Study (IEA/SISS), some special (national) analyses have been done. According to these (analysis of variance) results, the main effects of such strata are slight ($p < .03$) at the 10-year-olds level; this effect completely disappears by the end of compulsory schooling (where such regional or urban/rural differences cannot be observed). In the pre-university population significant differences in total scores and subscores again appear, however, with such small magnitude and inconsistency that no firm conclusions can be drawn.

The results from the IEA Reading Literacy Study accord with the above situation (Linnakylä, 1993a). Variables related to differences in the cultural and educational services offered by the school environment, or the size of the school (also correlated with remoteness) do **not** explain their reading achievement differences, and the even urban vs. rural environment does so only weakly. In contrast with such gross structural influences, it tends to be the more processual and instructional characteristics which have an influence on reading ability levels.

- It may be concluded that in the 1980s the Finnish education system had attained a relatively high state of general-structural (regional and urban/rural) fairness from the viewpoint of the user, i.e. the student and his/her expected learning outcomes.

4.3.4 Gender differences

Differences in access to education, instructional treatment, and learning outcomes between boys and girls constitutes a rather traditional and "self-evident" item of comparison in most surveys of education. They may be considered indications of rather fundamental cultural phenomena, representing values prevailing in a society and its schools, but also involving economic and scientific interests. (See Keeves, 1992, 141-154.)

Regarding access and retentivity of girls in academic secondary education is a case in point. In the early 1980s, as brought to light by the Second International Studies of Science (IEA/SISS), and of Mathematics (IEA/SIMS), with its 38 to 62 distribution of boys vs. girls in the total pre-university population (IEA/SISS), Finland stood out as one of the very few countries where there is a general female majority at that level. Interestingly, Hungary was a member of the same group, with an even stronger dominance by girls. More detailed subject-wise distributions are given in Postlethwaite & Wiley (1992, 36-37) where the general trend is from occasional female majority or equity in biology to common and substantial male majority in chemistry, and particularly in physics. With the exception of the latter, girls are overrepresented in both biology and chemistry in both Finland and Hungary. Thus the resulting *yields* in science education (which take into account the differential achievement levels) in both of these countries demonstrate an internationally rare advantage for girls. (Keeves, 1992, 152)

Whereas it is common (although not without exceptions) to have a consistently better *performance* (i.e. learning achievement) by boys in all fields of *science*, and at all ages (Keeves, 1992, 330-333), the situation is *reversed in reading literacy*. (Elley, 1992, 55-59; OECD, 1993: 172-174.) In science, the Hungarian system has attained a more equitable level of achievement between the two sexes, since most of the achievement differences (here favouring boys) are smaller than in Finland. One can only speculate about the reasons, but it is a fair guess that the instructional processes in science have a better (if not compensatory) appeal to girls in Hungary. This would merit an intensive study. - In reading literacy the two countries demonstrate by and large a similar pattern, where the female advantage represents the international average. (Among selected [OECD-] countries, the Finnish situation in fact represents a high degree of female advantage.)

In mathematics the situation is more complicated. (See Robitaille & Garden, 1989, 120-123, 143-147.) Whereas girls in the 13-year-olds population tend to outperform boys in Finland, but to a less extent also in Hungary, this situation is reversed between the two populations included in the study. When it comes to (the selective) pre-university mathematics specialist population, there is a consistent advantage for the boys in both countries. However, this time it is in Hungary where the differences are large - in fact the largest ones observed in the IEA set of educational systems. Thus it seems to be mathematics and physics achievement where gender inequalities are most notable in the two countries concerned.

4.4 Parental level of education and occupation as indicators of social mobility

Education leading to academic university studies has traditionally been provided for the fraction of student populations thought to have sufficient talents, ambitions and other prerequisites for higher education. With the advent of universal junior secondary education (Unesco ISCED level 2) in several countries, there has been an increasing demand for education at even higher levels of attainment. This has meant definite pressures for *upper secondary* or *gymnasium* education, and beyond. Due to limited resources and thus access, this pursuit for ever higher levels of education necessarily brings along processes of qualification and disqualification, or rejection of candidates willing to pursue studies at academic secondary and tertiary levels. It is widely known that such processes do not operate on the basis of scholastic merit or natural talent only, but are an agent of cultural reproduction, and determines to considerable extent what is considered socio-cultural mobility. In contemporary Western societies, such mobility accords with the democratic ideals and therefore constitutes a more or less explicit policy goal. In the countries under socialist régimes it has been taken for granted that class structure of the society is gone, and a thing in the past. In any case, the social mobility problem is an important one in any society which tries to foster comprehensive and universal education as a means of social and cultural opportunity for individuals, and at the same time for upgrading the quality of life for everyone in a society.

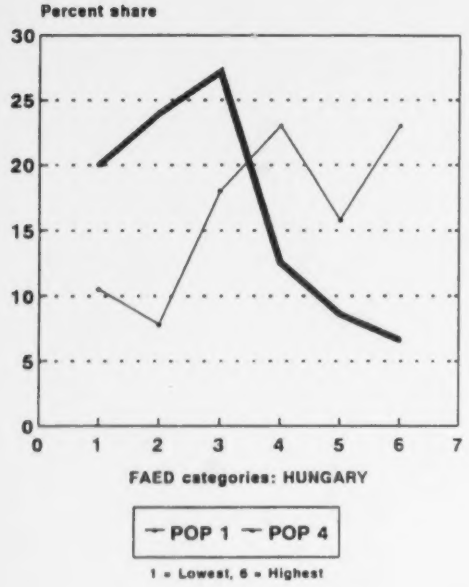
The IEA studies again offer some opportunities for shedding light on such fundamental societal processes in terms of student flows - in other words: actual use of educational services. For instance, the First International

Science Study (IEA/FISS) examined the issue under the terms "social bias" or "social selectivity" (see Comber & Keeves, 1973, 169-173) and an "occupational index" was calculated. It could be observed that whenever there was selectivity in (pre-university) education, there was also social selectivity. However, the actual nature of the process did not become very tangible. - In the present connection, the authors are tempted to present a few results which may be taken - if nothing else - as indications of the basic human nature of looking after the interests of one's own (children). They are presented in charts 4.2(a) to 4.2(d), next page.

The figures represent distributions of the level of family socio-cultural background in a) student populations which represent entire age groups, in comparison with b) student populations at the pre-university grade level. Basically it is considered that any differences in these two distributions speak of the nature of the possible social bias. As indices of family social background, Father's Educational level (FAED) has been available for Hungary, and Father's Occupational categories (FOCC) for Finland. (It is to be noted that the FOCC categories in Finland were to a large extent related to father's level of education. Thus the basic nature of these scales in the two countries is very similar.) In the first IEA science study, IEA/FISS (1970), student population 1 consisted of the 10-year-olds, population 2 of 14-year-olds, and in the second science study (IEA/SISS 1983-84) population 2 of grade 8 classes (the majority of which were 14-year-olds). Pre-university students are indicated correspondingly as Pop 4 (FISS) or Pop 3 (SISS). In order to make the whole age-group base more stable, combined Pop 1 & 2 values have been used for Finland. While it may be noticed that the particular categories differ slightly in these two countries, their actual construction was based on the same international guidelines, and the general pattern represents the same conceptual principle concerning educational levels. However, it is not so important to attend to the particular categories as to note the general trends and underlying phenomena.

CHART 4.2(a) SOCIAL BIAS/70/HUNGARY

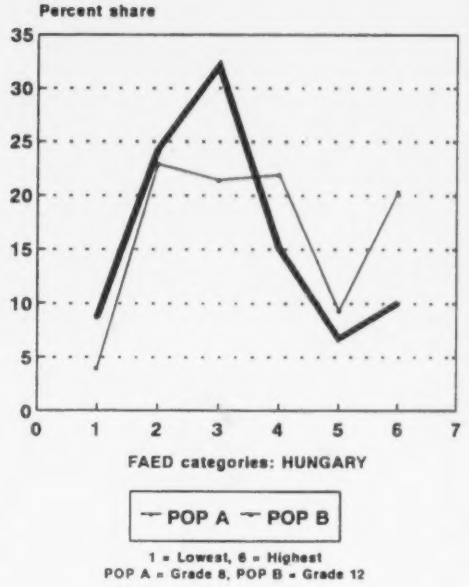
FAED distributions in FISS: HUNGARY
1970



1 = Lowest, 6 = Highest

CHART 4.2(b) SOCIAL BIAS/84/HUNGARY

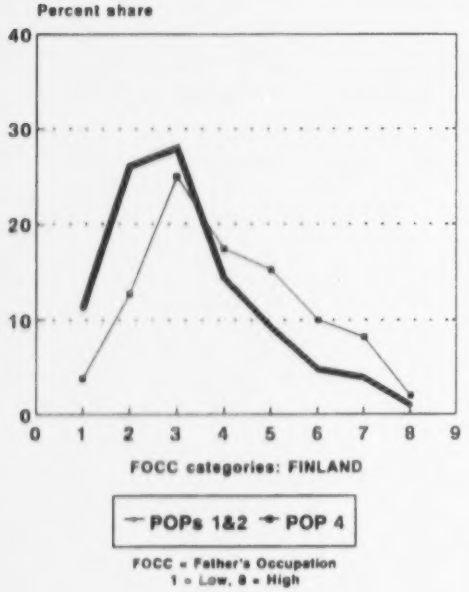
FAED distributions in SISS: HUNGARY
1983



1 = Lowest, 6 = Highest
POP A = Grade 8, POP B = Grade 12

CHART 4.2(c) SOCIAL BIAS/70/FINLAND

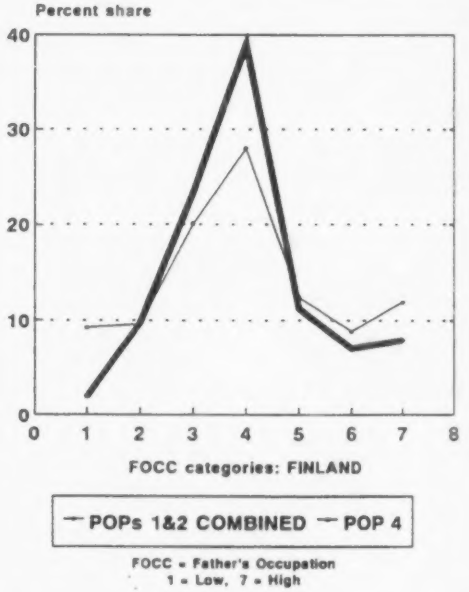
FOCC distributions in FISS: FINLAND
1970



FOCC = Father's Occupation
1 = Low, 8 = High

CHART 4.2(d) SOCIAL BIAS/84/FINLAND

FOCC distributions in SISS: FINLAND
1983–84



FOCC = Father's Occupation
1 = Low, 7 = High

The 'baseline' observations are from IEA/FISS, 1970 (Chart 4.2(a) and 4.2(c)). Here it may be seen that the Finnish social bias is evidenced by the small but clear 'movement' of the distribution towards the right. Also the general social trend and cutting-point are clear: the socio-culturally lower-level homes are underrepresented in the pre-university population, while the higher categories (above rudimentary specialized training and skilled workers) are overrepresented. However, the situation in Hungary in 1970 was much more distinct. While the same (self-selection) process seemed to occur, its nature was dramatic in its favouring of the higher socio-cultural background. And all this could happen after some 20 years of socialism and certainly contrary to proclaimed policies!

But what was the case some 14 years later? - In IEA/SISS (again studying science education), the Hungarian distribution had changed substantially. Both the lowest and the highest categories - although still under- and overrepresented respectively - had a much diminished bias, and the essential under-representation was mainly found among the middle categories. Clearly something had happened in Hungary during a good decade, which had developed the educational processes (and by implication: the whole society) towards the adopted ideals - but much more effectively than the decades before. Yet, this may be clearly seen as a problem area - if not a neuralgic point - among the social roles of education on the modern European scene. Its effects are not confined to representation only, but have a bearing upon subsequent educational and learning outcomes, which thus are open to rather strong influences of cultural reproduction and occupational mobility. (See also: Lehmann & Törmäkangas, pp. 187-190 in Purves, 1992.)

A shift in the general educational level and certain democratization had also happened in Finland during the same time period, which also involved a major structural and ideological school reform. The two distributions were now overlapping more clearly, and the locus of social bias was more specific. Here the essential underrepresentation was observed among occupational categoried representing skilled worker training, while the higher (professional) categories still retained their (slight) advantage. This might be reflected on what has been said elsewhere: the pronounced verbalistic nature of the Finnish upper secondary school, which is not so much appreciated by daughters and particularly sons from a pragmatically oriented family background, valuing practical skills. Perhaps also the improved relative salary scales are involved. - It is perhaps worth noticing that upper secondary education may be more clearly seen as instrumental to social upgrading

among the families of unskilled fathers, as evidenced by the clear over-representation of FOCC category 1. The corresponding difference at the other end of the scale is not nearly as distinct, or even surprisingly small. It would seem that by the early 1980s the Finnish situation could be interpreted as one of free and deliberate choice. Opinions might be sought as to where one should go from here. - With the limited wisdom that one has over current events, one is tempted to speculate that with the looming 'new poverty' and accentuated market economy which is bringing in problems of chronic unemployment, the situation is basically unpredictable. It is possible that with the extensive opportunities available, education and social mobility are becoming more a matter of individual motivation rather than family capacity. On the other hand: perhaps there is only one way down, and a new surge of social bias can be witnessed within another decade or two.

4.5 Comparisons and Reflection

When looking at the z-score figure (Figure 4.1), the following conclusions become evident:

* There are distinct differences between the Hungarian and Finnish profiles in the average achievement levels attained. There are particular content areas (school subjects) and age levels which seem to be 'domains of excellence' for each of the two systems, and in which they attain high levels of quality even in an international comparison.

* The subject domain in which **Hungary** seems to excel can be found the field of natural sciences, and especially so at the 14-year-olds and abitur levels.

* The age level in which Hungary generally performs well relative to other educational systems is about 13 to 14 years - in other words, at the end of compulsory general education. Underlying are decisive emphases in the curriculum, revealing the value placed in education on science and technology. Also, at the abitur level there are opportunities for considerable specialization in these subjects - a feature which is not nearly as distinct in Finland.

* Similarly, the subject domains in which **Finland** attains her highest relative standings vis a vis Hungary and most other countries are reading literacy, mathematics and, lately, science. The difference, however, is that while Hungary has her relatively (and also internationally) best attainments at the

end of compulsory education,

* Finland's best science achievements are attained in the very youngest age group, best mathematics achievements at the (more specialized) abitur stage, while her reading quality seems to be high at every level studied. Finland, too, has her headaches - this being in the field of science at the upper secondary stage. Especially chemistry and physics are of concern here.

* The domains in which these two systems are closest to each others in these international comparisons are science and mathematics at relatively early stages of schooling, from which their 'roads depart'. The literacy levels of both systems stand up well in a wide international comparison (which also includes a number of developing nations).

* It would also seem that the overall (very rough and general) profile of system-level performance over two decades demonstrates somewhat less fluctuation for Finland across the international range - i.e. there are less peaks and troughs in the overall profile.

Other data concerning access to and attained levels of education, as well as geographic and other distributions in achievement scores (not necessarily presented here) demonstrate that in Finland, a fairly high degree of uniformity in the quality of schools is maintained. While this is a *school* characteristics, it noes not imply a lack of *individual* differences and choices. This represents what one might call the Nordic model of education, where the creation of rather uniform opportunities for entire age groups is considered important. The provision of universal liberal education and preparation for life is considered such an essential social service and investment in the relatively small human capital that nations are willing to go to great lengths in maintaining a relatively open system. In this process, early specialization is deliberately being avoided. Such has not been the case in Hungary, where more determined decisions have been made concerning the scientific technological orientation of education in general, and specialization possibilities in particular.

The above observations, derived from the level of the achieved curriculum, may be reflected upon the different conditions and ambitions prevailing in the 1960s through 1980s (or, the entire post-war period) in the two systems. Due to her forced inclusion in a totalitarian ideology and economy, the rich cultural heritage of Hungary was somewhat subdued, and overwhelming

importance was attached to scientific-technical education. Relative rich and practical opportunities for learning were thus created for these subjects, to some extent at the expense of others. In Finland - where serious concern over equity issues and a reluctance for too early specialization prevailed and was manifested in its educational reforms - the humanistic tradition continued. This is evident in the relatively general liberal education provided (and examined) towards the end of secondary stages, including a conscious attempt at developing the intellectual tools for further learning in several fields, while avoiding serious - and exclusive - specialization. This has resulted in academic learning, which involves a good deal of language studies and a 'bookish' approach to most subjects, including the natural sciences. One might infer that in the latter domain, the consequences are possibly negative, while in some related subjects (e.g. mathematics) similar drawbacks do not necessarily emerge.

The results of IEA surveys seem to create a picture of Hungary - whatever the explanation might be - indicating that it is a country relatively effective from the viewpoint of education, in spite of its relatively low economic potential, of the low social interest in and the consequent limited resources allocated to education. (Table 11). Thus her **functioning is unconformist**: small investments, relatively high returns. Finland, on the other hand, is a definite example that considerable efforts of a nation - in economic, social and pedagogical sense - may produce returns in equity and effectiveness of public education. Thus, it is characterized by **conformist functioning**: big investment, high returns.

Dissimilar achievement profiles hide behind the similar effectiveness of the two systems of education. As indicated earlier in this study, the **humanistic sphere** - mother tongue, foreign languages, knowledge and attitudes related to man, society and environment - is a traditionally preferred field in Finnish education. In Hungary, however, at least in the period of the party state, a dominance of the **realia sphere** - science and mathematics - developed. It follows from the above that both systems of education have dissimilar neuralgic points. While the Finns actually intend to improve primarily the standard of teaching and learning science and mathematics, reconstruction of the humanistic side of education has been put on the agenda in Hungary for the 1990s. Thus, it can be definitely stated - and especially in fields of subject pedagogy - that **Finns and Hungarians may have a lot to learn of each others**.

Realization of equal educational opportunities is perhaps the greatest achievement of the Finnish system of education. Finnish schools - should they function in Lapland or in big city environment - could create close to identical opportunities for studying and achieving. As a result, learning outcomes indicate insignificant deviations at different schools. It can hardly be otherwise than due to coherent efforts the sociological determination of teaching and learning was minimized in Finland. The case is in contrast with Hungary where both the conditions of and the achievements in teaching and learning indicate rather significant between-school - and even between-class - differences. In Hungary pedagogical effects are still far from being able to counterbalance the differences of social origin. As a result, the system of education functions so as to reconstitute the social differences. For Hungarians, the most important lesson to learn of the Finns is: how to get out from this magic circle.

CHAPTER 5

SYSTEMS OF EDUCATIONAL EVALUATION

5.1 Theoretical Considerations in Hungarian Pedagogy

The approach to educational evaluation developed in Hungary may be traced back mostly to **cybernetic** antecedents. There spread and became naturalized the view of feed-back that the essence of educational evaluation is to explore information and to report it back to different components of the educational process with the objective of assuring the possibility of a continuous correction and optimalization of teaching and learning. This is the root of the experts' effort - never fully appreciated by the education policy - to integrate curriculum development and evaluation. Nevertheless, that view was radically superior to the former narrow concept, according to which controlling and qualifying students or learning would have been the essence of evaluation. Owing to cybernetics and the system approach, educational evaluation can already be described today as an activity influencing the entire system. (As a metaphor, educational activities may be perceived as regulated by evaluation in the same way as living organisms are regulated by the hormonal system.)

That change of the paradigm in educational evaluation took place in the 1970s, not much later than in the industrialized countries influenced by the Anglo-Saxon pedagogy. It became clear that the new paradigm offered adequate framework to integrate the traditions of psychometry and the new evaluation concepts and procedures, such as the evaluation roles (diagnostic, formative and summative) introduced by Scriven and given systemic functions by Bloom and his associates (Bloom, Hastings & Madaus, 1971), or the

criterion-referenced measurement notion, Glaser's innovation.

As to the theoretical and practical development of educational evaluation in Hungary, it has been affected early on by **two workshops**: those in Budapest and Szeged. The Budapest workshop attracted attention, at the outset, to the IEA surveys and examinations. In 1968, Hungary succeeded in officially joining the IEA and the Faculty of Didactics in the National Institute of Education became the Hungarian IEA centre. (After the dissolution of the National Institute of Education in 1990, this task was assigned to its successor institution, to the Centre for Evaluation Studies of the National Institute of Public Education. Thus, continuity in terms of personnel and organization could be assured.) National (Monitor) surveys forking off from those international examinations (IEA) significantly promoted the strong **empirical** approach that emerged and developed in the concept of educational evaluation.

The Szeged workshop developed at the Faculty of Pedagogy at the "József Attila" University of Arts and Sciences. At the outset, the workshop - in harmony with the centrally elaborated and generally compulsory curricula - elaborated and disseminated standardized subject tests and tests for measuring skills. Beginning with the early 1980s, the workshop started to focus on measurement experiments related to the developmental level of operational thinking. Recently, the Szeged workshop has instituted a Centre for Examining Basic Knowledge where elaboration and measurement of examination instruments for diagnostic purposes has been started. (Related to the historical antecedents of Hungarian educational evaluation and to the actual major trends and schools of research and development, cp., Csapó, 1992.)

The wide adoption of educational evaluation is proven by the considerable number of publications dealing with evaluation. Close to one thousand studies were published by expert authors - though with uneven frequency over the years - in the past 15 years (1975-1990).

The approach to educational evaluation, having rooted in Hungary, seemed suitable for formulating and answering not only questions related to schools and pedagogy but even questions related to society and education policy. It is another issue, however, to determine the extent to which researchers could live with the conceptual opportunities and in which the education policy seized this opportunity. It has become clear in our analysis that nothing more

than a "dialogue of the deaf" took place between researchers and education policy in the party state. Evaluation activities, however, could be continued and even national and county surveys started in addition to international comparative surveys. Professional work was developing, even if slowly and under adverse circumstances. Unfortunately, the "dialogue of the deaf" seemed to continue, even after the change in the political system (1990). Recent developments, however, are more promising.

5.2 The System of Assessment in Hungary

The effectiveness of systems of education has long been an exciting issue for education planners and researchers. But neither can teachers be indifferent to the achievements of the system in which they work. In the first approach, extensive and intensive examinations can be mentioned.

In the **extensive approach**, the effectiveness of a system of education can be characterized by the formal output of the system: the number of students successfully graduating from and given certificates in different school sections and school types. Of such data, indirect conclusions may be drawn related to the opportunities of different populations on the labour market and estimates made related to their respective level of education. There are, e.g., summaries indicating the level of acquired education according to the rate in which relevant sub-populations completed the possible (primary, secondary, tertiary) stages of schooling. The measure of completing compulsory schooling is another well-known but formal indicator of effectiveness.

However, it is a question whether completion of given schools may be considered identical with the knowledge deemed necessary by the society or maybe with the knowledge necessary for the quality of life desired by people. This means that the statistical data characterizing the output of a schooling system - should they be as informative as they can be - only describe the quantitative side of the effectiveness of schooling. Something should also be known of the **quality of the knowledge accumulated during the process of schooling**. Effectiveness must not be narrowed down to stating the rate of students graduating from schools or the number of certificates and diplomas issued. Though certificates and diplomas also express, in principle, the quality of knowledge, the qualifications given in the same subject but by different teachers at different places cannot be compared as such, because of the inevitable differences between evaluations given by different schools and

teachers. Thus, there is a need for more objective indicators describing the effectiveness of the system of education with carefully selected data. The qualitative **intensive approach** to effectiveness tries to **obtain valid and reliable estimates** related to the quality of different educational achievements regarding entire populations or sub-populations of youth affected by the system of schooling. Such intensive examinations will be described in the following subchapters.

5.2.1 The initial stage

Initiation of empirical research inquisitive about effectiveness, expressed in educational achievements, of the Hungarian system of education is associated with **Árpád Kiss** (1907-1979) who examined the level of general education of 8th-graders and academic secondary school students in the late 1950s and early 1960s. In the United States, much in the same years (1966) **Coleman** started to work on his epoch-marking study (Equality of Educational Opportunity). The first empirical survey of the state of English public education (Plowden Report, 1967) also was carried-out in the 1960s. The adoption of **survey techniques** (and eventually computerizing important aspects of research), working with representative samples and mobilizing large professional teams started in that period. That research methodology naturally was not yet at Árpád Kiss' disposal but his studies would have been suitable for the formulation of realistic education policies. However, the Hungarian education policy in the 1960s and 1970s did not lay claims to knowing the educational achievements and, indirectly, the quality of the functioning of the system of schooling, and rested satisfied with the reports - mostly based upon impressions and certainly "mincing" the reality - made by county offices and educational inspectors. The educational objectives - believed to be appropriate - and the setting of specifications for curricula were considered to have been the major assurances for effective functioning. Those making critical remarks and expressing doubts were hardly paid attention to and the methodology of empirical research was practically rejected.

5.2.2 International surveys and examinations

A break-through in the field of system level evaluation - from the point of view of both approach and methodology - occurred when Hungary joined the IEA. For Hungary, this cooperation enabled an international comparison of educational achievements to be made in some important educational fields.

Thus, at least in principle, Hungary could get rid of the provincialism, often threatening systems of education.

How could it happen that Hungary, within the frameworks of a socialist party state of Soviet type, could join the IEA? - Various explanations were dealt with to answer this tricky question. Most probably, the reform spirit (New Economic Mechanism) at the end of the 1960s gave impetus to such an opening (Halász, Lukács, 1988; Báthory, 1992b). Whatever the case might be, the wonder rather is that this cooperation could remain continuous while the official education policy seldom paid attention to the results and yet gave the inevitably necessary financial support. Hungarian IEA research belonged all the time to the "tolerated" activities.

Up to 1993, in cooperation with the IEA, a total of nine **surveys and examinations** were completed (Table 12; indicating only the most important references).

From among the studies enumerated, the processing of the data of Computers in Education and elaboration of the concluding study of the Reading Literacy survey is still in progress. Cooperation with the IEA is continued: TIMSS, the Third IEA Mathematics and Science Study is presently in full swing. There are also preparations for the Second Language Study to be started in 1994.

In 1990, cooperation was established also with the IAEP (International Assessment of Educational Progress), headquartered at Princeton (United States) in order to carry out a mathematics and science survey. The fact that certain countries not participating in IEA surveys were parties to that co-operation was the major attractive force for Hungary. Thus, the achievements of Hungarian students could be compared in a new environment. The survey took place in spring of 1991, which was soon followed by international reports published (Learning Science, Learning Mathematics, 1992).

5.2.3 National surveys

Beginning with the mid 1970s, parallel with - and inspired by - the IEA connection, extensive empirical explorations started in Hungary, in different fields of the system of education. Adoption of survey techniques is a common characteristic of these studies. Three characteristic groups of surveys and examinations can be distinguished.

5.2.3.1 **National surveys of effectiveness**. The first national survey was undertaken in 1980. That project was named TOF-80, after the initials of the Curriculum Theory Section (Tantervelméleti Osztály) of the National Institute of Education (Báthory et al., 1983). (The Curriculum Theory Section is one of the predecessor institutions of the Centre for Evaluation Studies.) Subsequently, a system of **surveys of monitoring type** (monitoring achievements) was designed, on the basis of also studying foreign survey systems (Báthory et al., 1985). The monitoring surveys extended to student populations attending the concluding grades of critical schooling stages (4th, 8th, 10th and 12th grades). As far as the content of the survey is concerned, that part indispensable for verbal learning was marked out for the whole of the subject matter of instruction. This sphere of knowledge is called **instrumental knowledge,** and reading comprehension, mathematics and computer literacy are assigned to this sphere. **Cyclical nature** is another important feature characteristic of these monitoring surveys. This means that the same knowledge in the same populations is repeatedly surveyed at determined time intervals (each 4th or 5th year). As a result, not only state-of-the-art reports can be given but even certain **trends of achievements** can be determined. The first monitoring survey took place in 1986 in all the populations selected (Vári et al., 1989). The second and third monitoring surveys were performed with general school populations in the spring of 1991 and in the 10th grade in the spring of 1993, respectively.

5.2.3.2 **Subject pedagogy surveys**. Curriculum competency and effectiveness surveys performed in different subjects became wide-spread beginning with the mid 1970s. Thus, subject pedagogy surveys were performed in various fields of teaching, e.g., biology, history, physics, drawing, foreign languages, written composition, and art. Evaluating subject innovations of national importance can be considered as a specific field of subject pedagogy surveys. Such evaluations were performed, e.g., in the fields of complex mathematics and language-literature-communication education. There almost exist no subjects or subject groups in which surveys or other fact- finding missions, adopting objective methods, would not have been done in the last one and half decades. A collection of studies, covering the surveys done in the past few years and their findings, has recently been published in Hungarian and English (Horánszky, 1991; SEE, 1992). By today, as a result of all of these examinations, a fairly clear picture can be drawn of the effectiveness, expressed in educational achievements, of the Hungarian system of education.

5.2.3.3 **County surveys of effectiveness**. County surveys, in general, are organized with the objective of modernizing the traditional work of inspectors on the one hand, and, on the other hand, of furnishing accurate data to the decisions made by the county level education administration. The system in Zala county, systematically functioning for more than 20 years, stands out as a pre-eminent case among other county surveys. However, significant progress can be reported from other counties, too.

5.2.4 Effectiveness indicators

In the past few years, many efforts were made to describe primarily the effectiveness of the functioning of secondary schools with indicators to determine in an objective way. Since 1972, a national organization has been collecting data related to the enrolment of Hungarian secondary school students to institutions of higher education, and such data are published in annual volumes. Out of these data, different parameters can be calculated which may serve as a basis for ranking secondary schools. Thus, in an indirect way, indications can be given related to the level in which secondary schools perform their task of preparing their respective students for higher studies.

Some years ago, a **secondary school data bank** was established and the following effectiveness indicators introduced to characterize the qualitative functioning of secondary schools:

(a) Quality of teaching and learning in the school, based on the enrolments to universities and colleges of their graduates. The enrolments were weighted depending on whether the students, after taking the matriculation examination, were enrolled to elite universities or to "regular" colleges.

(b) Quality of teaching and learning on the basis of students' participation in study competitions. In Hungary, study competitions are organized each year in each subject in order to stimulate schools to identify and educate talented students. The respective rank numbers between 1 and 20 were always registered in the data bank.

(c) Qualification of teaching and learning according to the number of state (non-school) certificates acquired by students in different foreign languages.

Efforts to cover the effectiveness of the educational and instructional work of secondary schools still contains several methodological problems today. No wonder that examinations and publications of this type arouse, in general, aversion and opposition of mostly the teachers and principals of schools in disadvantaged status. As a matter of fact, the methodological problem is that these indicators also attribute to schools such effects which rather correlate with the students' respective social status, or the sociological environment of the given school. In other words, the indicators elaborated by Hungarian researchers have still not been able to make a distinction between the effects originating from schools and teachers and from homes and families.

5.2.5 System of examinations

At present, the Hungarian system of public education has got no purposeful system of examinations at its disposal. The **matriculation examination**, the terminal secondary school examination with a history of more than one hundred years, is the only legitimate examination which, however, gradually has lost its prestige as a result of different reasons. In the present situation, what only matters is the **admission examination taken at institutions of higher education**, that is an examination beyond public education (though it also includes secondary school components). Thus, it is no wonder that several "wild" examinations have appeared in public education. They exist almost in each grade, section and school where the number of applicants is higher than the number of enrolments offered by the given school. From a professional viewpoint, these entry examinations are mostly inadequate and, as a consequence, it is no wonder that the difference in the social status matters most, instead of the selection based on abilities, at least in most cases.

In the past few years, several proposals were elaborated to solve this problem. The increasing interest in examinations can mostly be attributed to two reasons: (a) In the period of the democratic transition, the state seemed to relax its intervention into the content issues of schools. It was in this context and in that period that there emerged the concept of **output regulation**, to the realization of which the experts designed a system of examinations. (b) The **methodology of examining** developed up to a high level in the industrialized countries in the past few years and, as a result, almost every kind of knowledge can already be evaluated in a reasonably valid and objective way.

On a conceptual level, several factors in Hungary are working in favour of a well-considered system of examinations appearing on the scene, in the hope of motivating learning and increasing the effectiveness of the system.

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Great many initiatives were taken in Hungary in the past two decades to modernize the concept of educational evaluation, to develop and introduce a comprehensive evaluation mechanism extending to the whole of the system of public education. The national surveys and examinations and those performed in international cooperation directed the attention of the teachers and education policy to such results and problems which could not have been explored by other methods. As a result of systematic evaluation, the logic of development-evaluation-development has become prevalent in certain subjects and cultural fields.

Despite of all the above, the professional rationalism embedded in educational evaluation appeared not as an established practice but rather as a possibility in Hungarian public education. In the period of the party state, educational evaluation was tolerated by the official education policy but mostly regarded as an element basically alien to the system, and this is the reason why neither the concept nor the practice was allowed to become consummate. Though education politicians, having entered the scene after the democratic changes, declared several times the importance of educational evaluation, of getting acquainted with the reality, they have failed so far to create the proper infrastructure for evaluation. However, the chances of building up and operating a system of evaluation are much better than the situation used to be.

5.3 The System of Assessment in Finland

5.3.1 Background

First of all, it should be noted that Finnish education in the early 1990s is in a very rapid and even dramatic state of changes, which make it difficult, and sometimes impossible, to present a very firm and convincing statement of the situation. Fundamental reforms in the entire administration culture and accountability, affecting planning, resourcing and monitoring, are taking place, which tend to make any descriptions obsolete by the time they are

published. What follows is an account 'straddling two worlds', so to say, because completely omitting past practices (whose effects tend to prevail) would be an equally serious mistake as not mentioning some of the emerging principles and practices.

Secondly, it may be somewhat ambitious to discuss evaluation in the Finnish school *as if* it were a system carefully considered and decided upon. A more realistic description might be to view it as a set of activities and practices which have grown rather independently from different interests, without ever been considered as a deliberate feedback mechanism to serve planning and development work, and having particular strategies for obtaining a comprehensive picture of the entire multi-level situation. Different levels and interest groups seem to have their own spheres of operation - sometimes carefully guarded. One example of this is the matriculation examination institution which has almost solely been dedicated to individual-level accreditation purposes. Its connections to student assessment at the school level are one-sided, and its amenability to other uses of information have been limited. Likewise, educational research - of which national and international assessments are a part - proceeds largely on its own accord, usually seeking its legitimization and utilization prospects *post hoc*, after the study prospects and results have been worked out.

What is included here are programs concerned with the assessment of student learning outcomes with the idea that they ought to be:

* systems of outcome measurement from which one could generalize results to the country as a whole, or
* systems of outcome measurement used to describe student performance on a smaller scale (regional or local), both of which should
* have the potential of describing the performance of major portions of the student population.

Right at the outset it ought to be noted that the only formal or national system of **examinations** built into the education system is the **matriculation examination** taking place at the end of (the general/academic) upper secondary cycle.

The individual system descriptions include the following:

1. The Matriculation examination (abbreviation: M.Ex.), taken by students at the completion of the upper secondary school (12 years of education),

2. The Regional Councelling and Follow-Up System (CFUS), as set up by the National Board of General Education (NBGE),
3. The educational outcome assessment practices within the vocational education sector, as seen from the national (centralized) point-of-view.
4. The National assessment projects (abbreviation: NATAS), whose target groups are found both in the primary school and junior secondary school (i.e. in the compulsory basic education),
5. The IEA projects (IEA/MATH, SISS, WR etc.) which represent international assessment interests and may be considered either as large-scale curriculum evaluation studies, or research projects in comparative education.

These systems represent rather different traditions and uses of information provided by the assessment. Two of them have a history of more than a hundred years:

* The system of Regional Councelling has its roots in traditional inspectorate activities based on a system of District supervision (which was established in 1885 as a part of efforts to ensure centralized monitoring of and advisory services for schools and teachers, with distinctively administrative functions);
* The matriculation examination has been serving to ensure certain "level of maturity" of individual students entering the university (or, later: providing the general qualifications in competing for entry into higher education).

The others (notably the IEA approach and the national assessments) are considerably younger (dating from the 1960s and 1970s) and represent a relatively new research-oriented approach. The differences between the two traditions can be detected not only in the general purpose and function of the activities, but also in the established status and regularity of the system as a part of the formal educational establishment, with the older ones having more prestige, regular resources and powerful sanctions to ensure their continuity and importance. Other differences are related to the subjects of concern (participants) and the intended uses of the information gathered.

5.3.2 System characteristics

As a general characterization, even the traditional Finnish system of curriculum development, implementation, monitoring and evaluation may be described as a rather disjointed one, despite of its national (i.e. basically centralized) nature. Although the school subjects and their time allocations have traditionally been determined at the central (parliamentary and government) level, there has always been considerable freedom for teachers to make their own interpretations and conduct their own teaching without continuous or very strict supervision and control. (This may be seen against the background of the high professional ethics and the relatively high level of education of the teachers - all of whom are presently trained in the universities.) A case in point is learning materials production, which is completely taken care of by commercial publishers, although there has been (until recently) a post hoc approval system by national educational authorities. Within the vocational field the situation is even more complex, and it is often up to the teachers (or groups of teachers) to prepare their own sets of materials.

Likewise, the system of obtaining and using feedback information in the system of education is very disparate, partly a matter of different levels, of different (administrative or research) interests, and without an established, regular and comprehensive national coherence, despite some rather comprehensive plans. (See e.g. Kouluhallitus, 1986) As forerunners to the contrary, The National Board of Education and the Institute for Educational Research have established organized co-operation (since mid-1960s), which has allowed some basic development work towards research-based evaluation to emerge in Finland. The support of the former has enabled researchers representing a few essential subject domains to be active in conceiving and actually engaging in large-scale evaluation work. This has resulted in the development of school tests (in the 1970s) and in two *National Assessment projects* (in 1979 and 1990), which may be considered instrumental to basic evaluation capacity development in the system. The latter have also produced some serious data as feedback to system and curriculum development.

Assessment at the system level, however, does not constitute a strong or extensive system which would be so prominent as to be recognized by those who may even be contributing to it. As a result, it is not easy to compile anything like a comprehensive picture of the state of affairs in education at any one time. Likewise, an individual cannot look forward to any series of examinations to be taken e.g. at various levels of education, as promotion is

based on teachers' assessment, and there is only one national-level final examination. - All in all, the traditional Finnish system is not very strongly geared to external control or research-based interventions. Present-day aspirations do not point to that direction, either, since the main development aims and interests have a definite orientation towards internal assessment and school-based development. The following tabulation will give an orientation to this situation:

TABLE 5.1 Evaluation arrangements in Finland

	(ADMINISTRATIVE) ACCOUNTABILITY PURPOSE:			(PROFESSIONAL) DECISION-MAKING PURPOSE:		
LEVEL:	MONITOR ADVISE		CERTIFY	STUDY	EVALUATE	DEVELOP
SYSTEM	National & regional CFUS, Statistics		-	IEA	IEA	National Commissions
PROGRAM	Regional & local CFUS		-	NATAS	NATAS	National and local prosesses
INDIVIDUAL	Traditional inspection		Matric. Exam	Practical field experimentations,		INSET programs

CFUS = Counselling & Follow-up System
IEA = International cooperative projects of IEA
NATAS = National assessment projects (by IER).

Whatever remains to-day of administrative control of instruction is taking place mainly at the municipal and school levels. Any designs for monitoring education at the system-level either derives its essential data from statistics sought from these levels, or casual observations, some of which are concerned with pupil learning and performance. Alternatively, specially proposed and separately funded research projects are involved. The more regular feedback accumulates mainly according to the administrative hierarchy (school-municipality-province-nation) as part of the official duties of encumbents at various levels, but also directly in an interactive process across the levels. The latter is taking place e.g. at the in-service training/development institutions on a regular, continuous basis, as well as the frequent gatherings of educators from various levels and sectors at various conferences. More special opportunities for co-operation and contacts across various levels and sectors may occur at intervals. Thus for instance, the new national curriculum guidelines

were developed as a result of intensive interactive processes among various educators and interest groups. This work was coordinated by the National Board of Education, whose mandate it is to produce such general documents. In a small nation (of 5 million) such direct contacts rather efficiently can "spread the message" and involve a relatively large proportion of people in the discussion of common problems. Almost as a rule, educational researchers are involved in these meetings and discussions. Educational statistics complete the picture. The purpose is generally concerned with aspects of curriculum development (whether in administrative or professional context), save for the matriculation exam, which clearly provides for individual-level accountability through certification.

In the domain of professional interests, the principal (and the only comprehensive/representative) empirical evidence concerning student learning and its contingencies have been derived from either the IEA studies or the national assessment projects. To be sure, there is a substantial amount of educational research going on all over the country, but this tends to be oriented to problems different from the system evaluation interests. There is also a number of practical field experiments going on (mostly on individual school or teacher initiative, but supported by the central authorities), which provide some data and insight concerning various educational processes and school learning, and which are used for curriculum development purposes. However, such experimentation (in a sense: feasibility study) is not planned to be systematic in its coverage, nor does it provide representative or necessarily reliable data for serious feedback, or to serve decision-making at the system-level. (Such activities have other undeniable merits, however.)

Mapped onto a time continuum, the main (external, national) check-points of student learning may be indicated as follows. (For IEA and NATAS, the Xs indicate *typical* and *de facto* points of study, rather than pre-determined regularities, or obligations.)

TABLE 5.2 External evaluation time-points in Finland

GRADE:	1	2	3	4	5	6	7	8	9	10	11	12
IEA:				X				X				X
NATAS:				X		X			X			
MATRIC:												X
CFUS:	x	-	-	-	-	x	x	-	-	x	-	x

NOTE: CFUS follow-up and advice are mainly concerned with entire school units or municipalities. The system has been lately developed with a view to establishing a comprehensive information base for regional and national use. In 1993, the future developments of such provincial-level civil service are under debate, and it is impossible and unnecessary to suggest any serious alternatives here.

5.3.3 Certain particulars

Distinctive differences between the above sub-systems with regard to selected characteristics may be detected in the following:

- *The firmness and status of the systems:* While the CFUS and matriculation examination have long ago established their place as regular and recognized institutions in the Finnish school system, the IEA and NATAS are still seeking recognition and support;

- *The regularity* with which the exercise takes place: While the former are activities which are regarded as part and parcel of the system of education, the latter are occasional projects which presume separate initiative and may take place at intervals of a decade or more (from a subject domain's point-of-view). - This is of course a natural situation regarding any research projects. However, one may note that the latter represent the only attempt at obtaining a representative picture of student learning in Finnish schools.

- *The formality* of the system, and its sanctions: While the matriculation examination is a formal "accountant" of academically (to certain extent also vocationally) oriented secondary education and, likewise, the advisory activities are meant to monitor and serve the process and product of education on a regular basis and as an official responsibility, the assessment projects are based on the good will and voluntary 'tolerance' of the participating schools, teachers and students. The difference in *sanctions* is enormous: an

individual's or a school's refusal to participate in the IEA or national assessments is nonconsequential, while omitting the matriculation exam will change a person's life chances - - and it is not really possible for a secondary school to avoid this responsibility if it wants to preserve its status as a normal, qualified educational institute. Likewise, it is unthinkable that a school or municipality would refuse a CFUS visit.

- *The general purpose of the system:* While the matriculation exam seeks to provide individual-personal assets for its participants, the other assessments seek to provide insight and conclusions which might serve system and program evaluation and development needs in a more general and extensive sense. In principle then, the former serves accountability purposes at the individual level through certification procedures, while the latter serve decision-making (or conceptual-theoretical, research) purposes at the program and system levels.

Originally, the main purposes of Finland for participating in IEA studies were related (1) to the desire of getting fresh ideas and direct experience in constructing instruments for educational measurement, (2) to monitor learning outcomes in a changing educational system, and (3) to enter international cooperative work in the field of educational evaluation. Only later have the more theoretical and comparative educational research issues come into the picture.

The NATAS projects are linked with the need for more intensive and perhaps also more frequent curriculum and system evaluations at a time when regular IEA repeat studies were not clearly foreseen. There have been considerable developments in the Finnish education system in the past 20 years, and it has been deemed necessary to try and monitor the changing situation. In the first NATAS in 1979, the dominant interest was in testing to cover the cognitive curriculum (with multiple matrix sampling and item response theory implications experimented on), while e.g. in the on-going second NATAS project the interests in the various sub-studies have been more variable, perhaps revealing the general trends in the administrative and professional culture to-day. (Cf. Linnakylä & Saari, 1993; Brunell & Kupari, 1993)

- *Participants in the system* (as subjects): pupils participating in the matriculation examination mainly constitute *the entire student population* enrolled at a certain level and type of secondary schools (presently about 50 percent of the corresponding age group), while participants in the IEA and

NATAS studies come from specific *(representative probability) samples* of pupils from several different age or grade levels. Thus, for instance, the national assessments may involve pupils from age 9 or 10 through 13 or 14 or 15 (usually grades 3-4, 6, 8 or 9) and the IEA studies usually run through 10-year-olds, 13-14 year-olds, and matriculants (the age of whom is about 18 or 19). Of course, the matriculants represent one educational (grade)level only, but their age range may be quite large. The central/regional counseling and follow-up system (CFUS) has been a bit of a mixture: while information for statistical purposes is provided annually, the visits are regular (rotating), but their information interests are variable and not restricted to particular grade-levels or topics - save for periodically defined areas of emphasis. Lately the orientation has been towards obtaining a comprehensive picture of the work of a school unit, or education sector activities in an entire municipality (rather than focussing on particulars, such as student learning).

- *The type of data gathered:* The matriculation examination and the IEA studies represent the approaches most directly concerned with cognitive student achievement. The IEA approach has been probably the more restricted one, having to resort (for practical reasons) mainly to multiple-choice techniques, while the matriculation exam has the resources to make extensive use of techniques which allow a deeper and more variable penetration into measuring intellectual skills. On the other hand, IEA (and NATAS) data include a large variety of specific contextual information from various levels, which provides strong potentials for developing various explanatory models. Such interests are not part of the matriculation exams system.

The Counselling and follow-up system is based on more direct experience and contact with educational institutions. However, there is no particular focus on cognitive learning outcomes - rather on the educational endeavour as a whole (and including e.g. libraries and adult education). This involves profound acquaintance with the context and processes of teaching and learning in very concrete situations, with their purposes considered and problems taken up - often with the personalities accounted for. The controlling of learning outcomes in such situations is of course more impressionistic, but at the same time a wide range of spontaneous and useful qualitative observations becomes possible. No doubt such observations of educational processes and student outcomes - if reliably recorded - have definite value as educational indicators, which may form the basis for immediate, on-the-spot feed-back and recommendations. From the general point-of-view, their main weakness tends to be their basic nature as unique and isolated phenomena, which without careful documentation and systemat-

ization (allowing aggregations and comparisons across time and places) may remain only part of the personal - rather than wider - experience.

- The eventual *use of assessment information:* the results in the matriculation exam are used specifically and almost solely for student certification. This means that there is a high degree of confidentiality and protection of such personal information, and that the use of the principal outcome of the examination remains at the individual level only. In contrast, the assessment projects - while maintaining individual integrity - seek to arrive at analyses and interpretations which would serve the education system and its curricula in as many ways and levels as possible. Again, the CFUS activities (which are based on civil servant responsibility and integrity) provide the possibility for direct observation and also intervention in school or municipal affairs. In addition, the accumulation of such experiences over time, within region (province) and even nationally has strong potentials. However, the modus operandi of bringing together such direct experience with educational context and processes with the more indirect experience provided by research (especially on student learning outcomes) has not been fully developed to enable creating a many-sided national picture of educational progress.

- *Generalizability of results:* The Matriculation Examination Board has not demonstrated (theoretical) interests for the generalizability of its results. Although there have been several developments in the contents and organization of the examination, these have not had generalizability or curriculum evaluation as their major concern. The issue is embedded in the concern for the overall relevance of the examination as a demonstration of 'maturity' and entry qualifications. Basically then it is concerned with content validity and generalization to curriculum objectives. In many respects, the matriculation exam may be regarded as "the tail that wags the dog", as teaching in the upper secondary school has a heavy orientation towards the requirements to be met in the final exam. (Cf. Whetton, 1993; Directorate of Education..., 1993)

The central and regional councelling and follow-up services (CFUS) may be seen having its objectives set at both particularizing and generalizing, the former being the more obvious purpose. The potentials for more generalized learnings are being developed, although the issue is not without its problems, particularly in a climate which strongly advocates local and school-unit independence in planning, follow-up and development decisions.

The IEA and national assessments, to the contrary, have always considered issues of generalizability and sampling theory as central to their approach. In the former, in addition to their curriculum orientation, the sampling of students has been at the focus of concern, while in the latter, there has been an attempt to apply modern testing theory (IRT) in the sampling of (cognitive) contents as well.

- *Innovative and trend-setting properties:* Despite of occasional heated discussion concerning the role and contents of the matriculation exam, its actual developments have been small and 'incremental', rather than 'reformatory'. Apart from developments in the area of foreign language testing, most of the changes have been technical in nature. In this respect, the examination may be regarded as a rather conservative system of cognitive testing. Although researchers are involved in the Board's committees, any developments have to be well-proven and widely accepted before they can be adopted as part of the examination system. In addition, schools have to have a clear idea of any major developments at least three years prior to their implementation. All of this, almost by definition, labels the exam as one slow to develop. Although there has been radical suggestions all the way to the abolition of the examination, there is a widely held view that it is desirable and necessary as one of the serious goals that people may have in their educational career. Its earlier prominence, however, is slowly fading off, as half of an age group is nowadays taking the exam, and the other half is pursuing vocational paths which are becoming equally challenging, rewarding and attractive.

From other than purely individual perspective, the IEA and National Assessments may well be regarded as more broad-minded and innovative sets of studies. This is related naturally to their less 'responsible' character, not being accountability systems which must be regularly implemented as a kind of 'final service' to students after certain years of study. These assessments can be rather freely conceptualized and developed according to problem interests and theoretical views which may be new and timely, but then also transitory. In this respect one may detect a difference between the latter two. In international cooperative studies, *several compromises* are necessary in order to reach consensus on what is desirable and feasible in many different environments. This prudency restriction tends to make the studies somewhat conservative on such other grounds, which may cause certain disillusion in particular fields and countries. Few exploratory elements can be allowed in the core studies under heavy time pressure and due to their multiplicative consequences to massive data processing. Although IEA studies may well be

seen as pioneering enterprises/approaches in their beginning, their basic model and approach (save for a few studies such as Pre-Primary, Written Composition and perhaps Classroom Environment) have remained much the same for a rather long time. Being useful for several reasons, one may turn necessity into a merit and plan for deliberate 'repeat studies'. In the 1990s this conservative 'longitudinal' trend will obviously prevail in IEA. On the other hand, there have been developments in various other areas, notably statistical techniques and related data processing.

Although being parallel to IEA work in many ways, the National assessments have moved to the direction of more variety and less commonality in terms of research interests and methods. Being loosely organized as a set of separate studies, a variety of interests are being pursued. While some of the recent NATAS-sub-studies actually were part of IEA work, their national elements will make them more responsive to local needs. In addition, there are sub-projects with minimal intellectual debt to IEA. It may be seen that national research projects have the potential of providing the most flexible and innovative kinds of assessment, and that it is indeed wise to make use of the rationale and methods developed nationally even in international context. In fact, this is what has been done in Finland, where a great number of national items have always been inserted into IEA's international sets of variables.

In 1994 the Finnish situation is very much in a state of flux. While the entire management culture in the education system is undergoing deep and rapid change, the strategic roles of various existing traditions also need to be reconsidered. It seems evident that the role of program evaluation at the municipal and school levels will gain importance and, accordingly, need enhanced attention. At the same time, student assessment is receiving multiple influences from experiences gained in experimenting field practices as well as more directly from abroad. However, with increasing local responsibilities and decision-making powers, and purely for the purposes of empirically-based awareness the need for system-level monitoring information would seem indispensable. However, the transition from administrative control to professional and developmental interests is by no means self-explanatory, and the entire strategy needs to be considered and developed from that perspective. This is a task involving not only rational principles and arrangements, but a good deal of new insight and conviction, and thus negotiation at every level concerned.

5.4 A Look Ahead

The world in the 1990s is characterized by two tendencies almost paradoxically opposite: one holding up the value and importance of the *local and individual* idiosyncrasy, the other recognizing the necessity of *commonalities across nations and cultures*, with bold visions for unity and co-operation. Traditional values and practices are challenged in a degree perhaps unprecedented in history, entire economies are transformed, and the need for new skills and knowledge are continuously emerging. As educators we must serve the interest of the child as an individual, yet appreciate the necessities of real life in a shrinking world and give adequate attention to the means of providing educational services for entire nations. And not only nations, but in the interest of the "global village". In so doing, certain loyalty will necessarily be devoted to particular educational systems and their program operations. Very few seem to know - let alone agree with - the principles on which good and successful life can and will be built in the forthcoming decades. This *soul-seeking between unity and diversity* will no doubt provide a multitude of challenges not only to economists and policy-makers but to all educators, parents as well as students. The question eventually becomes one of *interlearning*: What could we learn and adopt from others - as individuals and nations - and what could we give to them? The present paper is one tiny step in such efforts.

One of the key elements in any educational effort is the provision of pertinent and timely feedback in support of goal-directed process. This need is evident at every level from the individual student's and teacher's learning needs to program and system monitoring and development. What is often lacking is an ethically and professionally sound rationale for obtaining and using the necessary information, which would be acceptable under even the most critical observation. There is no doubt that most of the practices developed over time in different educational environments do have their good purposes and justifications. It is equally true that some of these have their malfunctions which run counter to the original main purpose. Quite conceivably, these undesirable consequences may partly stem from a limited understanding of the fundamental role of evaluation in human activities, and leading to strategies based on inadequately developed evaluation culture. Therefore most systems and practices can benefit from critical scrutiny and occasional revision. Since the world of education is everywhere challenged by new expectations and have continuous, intensive innovation processes underway, it is only natural that international exchange and an open mind to innovation

are a part of the modern picture. But in order to become aware of the presently existing state of affairs and its development needs, some feedback mechanism is necessary. Regarding public education, this system and its functions take their interest at various levels of system operation. Like education itself, also educational evaluation as an organized activity grows out of the nation's socio-cultural setting and economic pre-requisites. Its capacity-building may take years to accomplish and needs constant updating. Yet certain general and common aspects could be mentioned.

Educational evaluation as a system and strategy needs to take into account and do justice to the environment in which it operates, the purposes it tries to serve, and the phenomena which are of interest. Thus it is necessary to realize that education constitutes a complex societal system, which operates at *different levels for different purposes*. For instance at the very basic level, feedback information will be necessary *to support student learning*. This presumes know-how which is part of a teacher's professional didactic skills. Likewise, it is necessary to take into account slightly more general needs: local, regional, or *programme-level* evaluation then becomes necessary, particularly as the currently prevailing (decentralized) management ideals actually presume adopting added responsibility at these levels. Here is an avenue for real freedom and development, based on unleashed energies and innovations within schools and regions. Well organized monitoring and evaluative evidence can be seen as *more* important in a decentralized than in a centralized system, because there is more possibility for both responsible and irresponsible practice, and because the really favourable, good practices should not go undetected and unrewarded. It is sheer hypocricy to think that one could ensure quality services and outcomes on the basis of incidental, ad hoc information which is not bothered with conceptual rigour and technical standards. Therefore evaluation activities cannot be far removed from authentic research, which can be expected to take on the new challenges and find new areas and strategies of application. Much of IEA research may be regarded as having taken this curriculum interest.

Finally, since formal education usually is a system nationally conceived and supported by public funding, it is of general interest to monitor the state and accomplishments of this system. With the advent of intensive cross-national exchange in several walks of life, also educational efforts have become the object of comparison, reflection, and development. More than ever, this has increased the demand for explicit, empirical information to support conclusions and subsequent decision-making. For such purposes, systems of

educational indicators can - and have been - developed (OECD, 1992, 1993). Here the interests are large-scale and comparative across nations, which in practice means policy orientation. The evaluation potential involved has only been developing over the past few decades, but is rapidly gaining ground, not least due to enhanced technical possibilities.

Together with the realization of multi-level interests in a complex societal system such as education, *the utilization of information* has become a more important issue than before. Intensive and continous development work will not allow us remain seated, even after long-term studies have been completed. Ways have to be sought through which the new learnings can be disseminated and made active in other people's thinking. Likewise, new interpretations have to be sought and allowed to influence the next generation of evaluation studies - because the world of learning implies learning by everyone involved, including teachers and researchers or policy-makers as well as students. (See e.g. Prospects, 1992, 83, 84) Part of the utilization scene has to do with *the roles of evaluation*, in other words the tasks, strategies and responsibilities involved. More than before, the formative roles of feedback in the processes of decision-making and development, have come to the fore. While this will affect also the nature and contents of evaluation, entire strategies have to be considered when developing comprehensive blueprints for systematic work in this area.

Reflecting on the above, it can be seen that both in Hungary and in Finland, much work has already been done in educational evaluation and, at the same time, some of the necessary long-term developments have been taking place. However, building something like an *evaluation culture* necessarily takes a long time, and only the first steps have been taken so far on this road. The experiences gained have served mainly to highlight certain aspects of the vast and valuable - and also expensive - educational effort, but if this coverage is to be so systematic as to do justice to the basic investments in material and human terms, a good deal of work is still remaining. It is our sincere hope that future comparisons of our "cousin nations" can be more extensive and valid enough to constitute further steps ahead on this road.

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APPENDIX

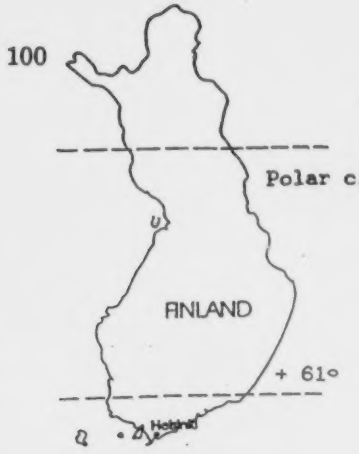

TABLE 1
Area, population, economics, infrastructure

FINLAND		HUNGARY
	Area (km^2)*	
338,114		93,033
	Population (1993)	
5,020,000		10,493,000
	Average annual population growth rate % (1980-1993)	
0.4		-0.2
	Density (km^2, 1993	
15		113
	Urban % (1993)	
60		64
	GNP per capita in US $ (1990)	
26,070		2,780
	Average annual GNP growth rate % (1980-1990)	
3.1		1.5
	Life expectancy (1989)*	
78 female 70 male		74 female 67 male
	Television receivers per 1,000 inhabitants (1990)	
496		410
	Telephone main lines per 100 inhabitants (1990)**	
54		8
	Daily newspapers, number of copies per 1,000inhabitants (1990)	
558		233
	Consumption of printing and writing paper, kgs per 1,000 inhabitants (1990)	
135,468		18,952

Sources: * World Facts and Maps. Rand Mc Nally, Chicago, 1990
** HVG (Hungarian Economic Weekly) XIV.41. 1992 October 10.
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TABLE 2

Expenditure on education (1988 and 1991)

Public and private expenditure on education, as percentage of GDP:		Public expenditure on education, as percentage of GNP:	
FINLAND		FINLAND	HUNGARY
1988	1991	1990	1990
6.8*	6.6**	6.2	6.1
OECD averages: 1988: 4.8 1991: 6.1			
Public expenditure on education as percentage of...			
... total public expenditure:		... government expenditure:	
1988	1991	1990	1990
17.1***	14.7****	15.9	7.8
OECD averages: 1988: 12.0 1991: 11.8			

* Third highest among the 20 OECD countries
** This indicator for Hungary in 1991: 6.7
*** The highest among the OECD countries
**** Second highest (tied) among the OECD countries.

Sources: Year 1988: Education at a Glance, OECD-CERI-INES, 1992
Year 1991: Education at a Glance, OECD-CERI-INES, 1993.
Other: World Education Report, UNESCO, 1992

TABLE 3

Curriculum-policy alternatives in Finland and Hungary

Administrative levels	FINLAND		HUNGARY	
	1983	Preparatory (in 1992)	Up to 1990	NCC-3[1]
Central	xx	x	xxx	xx
Regional	--	--	--	--
Community	xx	xx	--	--
Local/school	--	xx	--	xx

Legend:

xxx	dominant effect
xx	strong effect
x	minor effect
--	no effect

Notes:

[1] Third draft of the National Core Curriculum.

Typical subjects and weekly lesson hours in the respective elementary grades of Finnish comprehensive schools and Hungarian general schools

Subjects	1st		2nd		3rd		4th		5th		6th		Total	
	SF	H	SF	H	SF	H	SF	H	SF	H	SF	H	SF	H
Mother tongue[1]	7	9	7	9	5-6	9	5-6	7	4-6	5	4-6	4	32-38	43
Foreign language[2]	-	-	-	-	2	-	2	2	2	3	2	2	8	7
Environmental studies	2	-	2	1	2-3	1	2-3	2	3-4	2	3-4	-	14-18	6
Geography	-	-	-	-	-	-	-	-	-	-	-	2	-	2
Biology	-	-	-	-	-	-	-	-	-	-	-	2	-	2
Physics	-	-	-	-	-	-	-	-	-	-	-	2	-	2
Form-master's hour[3]	-	-	-	-	0-1	1	0-1	1	0-1	1	0-1	1	2-3	4
Religion or ethics	2	-	2	-	2	-	2	-	1	-	1	-	10	-
History[4]	-	-	-	-	-	-	-	-	1-3	2	1-3	2	3-6	4
Mathematics	3	5	3	5	4	5	4	4	4	4	3	4	21	27
Music[5]	1-2	1	1-2	2	1-4	2	1-4	2	1-4	2	1-4	2	6-18	11
Art[5]	1-2	1	1-2	1	1-4	2	1-4	2	1-4	2	1-4	2	6-18	10
Handicraft[5]	1-2	-	1-2	-	2-4	-	2-4	-	2-4	-	2-4	-	10-18	-
Physical training[5]	1-2	3	1-2	3	2-3	3	2-3	3	2-3	3	2-3	3	15-16	18
Technical work	-	1	-	1	-	1	-	2	-	2	-	2	-	9
Total[6]	19-21	20	19-21	22	23-25	24	23-25	25	24-26	26	24-26	26	134-144	145

Legend:

[1]In Hungary: Mother tongue and literature
[2]In Finland: Foreign (mostly English) or second domestic language
[3]In Finland: Civics (including student counselling)
[4]In Hungary: History and civics
[5]In Hungary: Singing and music, Drawing, Physical training. In Finland: Music, Art, Handicraft, Physical Education (the minimum aggregate number of lesson hours is 44 in these 4 subjects)
[6]In Finland, the compulsory number of weekly lesson hours varies in several subjects, and schools may choose different combinations but the given number of weekly lesson hours must be neither increased nor decreased

Note: The compulsory number of teaching days is 190 in Finland, and 180 in Hungary (190 according to the Education Act of 1993).

TABLE 5

Typical subjects and weekly lesson hours in the lower secondary stage of Finnish comprehensive schools, as well as in grades 7 and 8 of Hungarian general schools and in grade I (9) of academic secondary schools

Subjects	7th		8th		9th	I	Total	
	SF	H	SF	H	SF	H	SF	H
Mother tongue[1]	3	4	3	4	3	4	9	12
A-language[2]	2	2	3	2	2	7	7	11
B-language[2]	3	-	3	-	3	-	9	-
Religion or ethics	1	-	1	-	1	-	3	-
History and civics	2	2	2	2.5	2	2	6	6.5
Mathematics	3	4	3	4	3	5	9	13
Physics	-	1.5	-	1.5	-	2	-	5
Chemistry	2*	1.5	2*	2	3*	2	7*	5.5
Biology	-	1.5	-	1.5	-	-	-	3
Geography	2**	1.5	2**	1.5	3**	3	7**	6
Music/Singing and music	1	1.5	1	1.5	1	1	1/3	4
Art/Drawing	2	1.5	-	1	-	1	2/4	3.5
Home economics	3	-	-	-	1	-	4	-
Technical and textile work[3]	3	1	-	1.5	-	2	3	4.5
Physical education	1	3	1	3	1	3	3	9
Student counselling/Form-master's hour[4]	1	1	1	1	1	1	3	3
Total	30	26	24	27	24	33	78	86
Elective subjects[5]	-	2	6	2	6	-	12	4
Grand total	30	28	30	29	30	33	90	90

Legend:
[1]In Hungary: Mother tongue and literature
[2]In Finland: A-language is a foreign language which starts at the lower stage or the second domestic language; B-language is a foreign language or the second domestic language studied from on the seventh year-class onwards. In Hungary: the first and second foreign languages together.
[3]In Hungary: Technical work
[4]In Finland: Student counselling; in Hungary: Form-master's hour
[5]Elective subjects in Finland: C-language (foreign), Technical work, Textile work, Home economics, Agriculture, forestry and horticulture, Economics, Information technology, Music, Art, Typing, Sámi language
*Physics and Chemistry together **Biology and Geography together

Typical subjects and weekly lesson hours in Finnish upper secondary schools (grades 10 to 12) and in grades II to IV (10 to 12) of Hungarian academic secondary schools

Subjects	10th (II) SF	H	11th(III) SF	H	12th (IV) SF	H	Elective SF	Total SF	H
Mother tongue[1]	3	5	2	4	3	4	-	8	13
A-language[2]	3	5	3	3	2	2	-	8	10
B-language[2]	2	-	3	-	2	-	-	7	-
C-language or D-language[2]	3+3	-	2+3	-	2+2	-	-	7-8	-
Religion or ethics[3]	2	-	2	-	1	2	-	5	2
History and civics	2	2	3	3	2	4	1	7-8	9
Mathematics[4]	3-4	4	2-4	3	1-3	3	1	6-11	10
Physics	-	2	-	3	-	3	-	-	8
Chemistry	1	4	1	-	-	-	1-2	2-4	4
Biology	1	-	2	4	-	2	1	3-4	6
Geography	1	2	1	-	-	-	1	2-3	2
Health education	1	-	-	-	-	-	-	1	-
Art or music[5]	2	1+1	2	1+1	-	-	1-2	4-6	4
Technical work	-	2	-	-	-	-	-	-	2
Physical education	2	3	2	3	1	3	-	5	9
Student counselling/Form-master's hour[6]	1	1+1	1	1	0.5	1	-	2.5	3
Total[7]	26	33	26	26	14.5	24	-	66.5	83
Elective subjects[8]	2-6	-	2-6	7	4.5-7	9	-	8.5-19	16
Grand total	28-32	33	28-32	33	19-21.5	33	-	75-85.5	99

Legend:
[1]In Hungary: Mother tongue and literature
[2]In Finland: A-language is a foreign language which started earlier or the second domestic language; B-language is a foreign language or the second domestic language studied from on the seventh grade onwards; C-language and D-language are elective foreign languages for those studying a short course in math
[3]In Hungary (grade IV): Philosophy
[4]In Finland: short course (3, 2, 1 and 1 elective) or long course (4, 4, 3)
[5]In Hungary: Art and music
[6]In Hungary (additional 1 hour in grade II): Orientation
[7]In Finland, the compulsory number of weekly lesson hours varies in several subjects, and schools may choose different combinations but the given number of weekly lesson hours must be neither increased nor decreased
[8]Elective subjects in Finland: Third foreign language, Physics (short course or long course), Psychology, Information technology, Philosophy

TABLE 6

TABLE 7

Higher education in the light of facts and figures: in three countries of the industrialized world and in Hungary (World Education Report, 1991, 1993)

COUNTRY	Number of students in higher education, per 100 000 inhabitants		Enrollment in higher education (% of the age group)	University students as percentage of total higher education
	1980	1990	1990	1988
AUSTRIA	1811	2668	34.3	93
FINLAND	2577*	3326*	48.2*	70
UNITED STATES	5311	5591	72.2	63
HUNGARY	945	970	14.5	65

* The highest value in Europe

TABLE 8

Enrolment rates in secondary education (%)

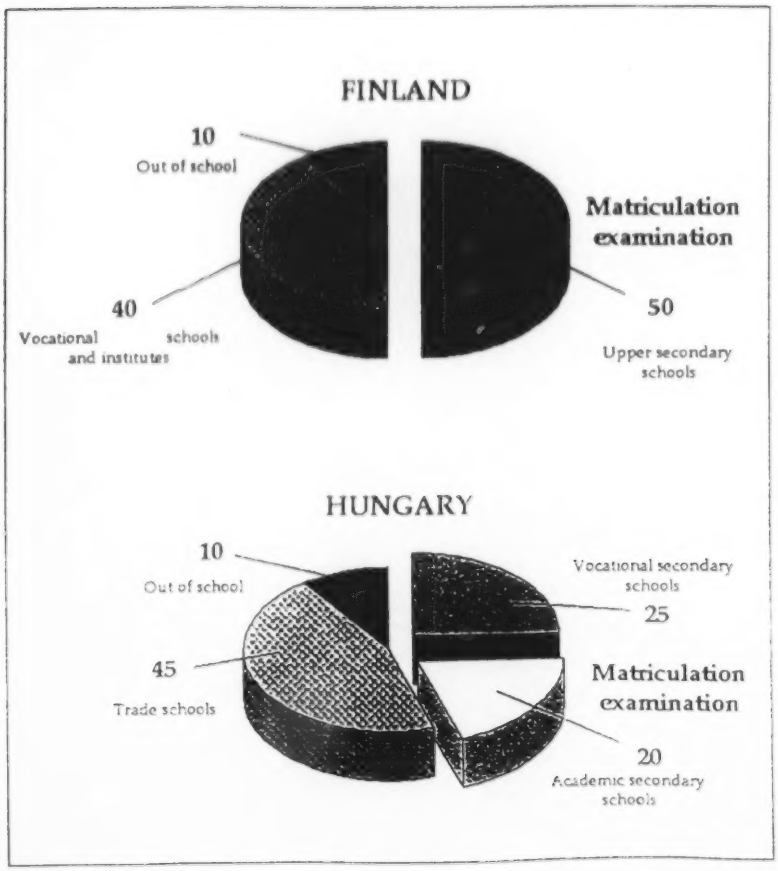

TABLE 9

Methods of testing in the Finnish matriculation examination

METHODS OF TESTING	Mother tongue	Second national language	Foreign language	Mathe-matics	Realia subjects
Multiple-choice test		X	X		
Short answer: one word		X	X		
Short answer: one sentence		X	X		
Short answer: one paragraph					X
Essay	X	X	X		X
Complex product, open-ended task				X	X

TABLE 10

Effectiveness of Finnish and Hungarian education in the light of five IEA surveys (rank orders).

- IEA SURVEY and year of measurement; - Reference	POPULATION 1			POPULATION 2			POPULATION 3		
	FIN		HUN	FIN		HUN	FIN		HUN
- SCIENCE, 1970 - Comber & Keeves, 1973.	5	(12)	6	11	(14)	2	8	(14)	7
- READING COMPREHENSION, 1970 - Thorndike, 1973	3	(12)	10	5	(13)	8	5	(12)	11
- SIMSS, 1980-82 - Robitaille & Garden, 1989							*		
-- Arithmetic				14	(20)	7	-	(13)	-
-- Algebra				9		6	4		3
-- Geometry				8		2	3		2
-- Measurement				9		1	-		-
-- Descr. statist.				8		5	-		-
-- Calculus				-		-	2		6
- SISS, 1983-84 - Postlethwaite & Wiley, 1991	2	(18)	6	6	(25)	1	BIO: 11 CHE: 16 PHY: 16	(19) (19) (19)	4 7 3
- READING LITERACY, 1991 - Elley, 1992.	NARR: 1 EXPO: 1 DOCS: 1	(27) (27) (27)	17 18 13	NARR: 1 EXPO: 3 DOCS: 1	(31) (31) (31)	10 7 8	- - -		

The Number of countries participating in each survey is given **in parentheses**.

Science subjects:Reading tasks:
BIO = BiologyNARR = Narrative tasks
CHE = ChemistryEXPO = Expository tasks
PHY = PhysicsDOCS = Document tasks

* Achievements of **the best 5 per cent** of the examined samples.

TABLE 11

Major conclusions related to the effectiveness of Finnish and Hungarian education - in light of the five IEA surveys common to both.

PARAMETER	FINLAND	HUNGARY
1. Estimated level of average effectiveness of the education system.	HIGH	HIGH
2. Relations between effectiveness of the economy and of the education system.	Balanced: Large investments, high returns.	Unbalanced: Small investments, high returns.
3. Characteristic differences between the achievement profiles.	Humanistic emphasis.	Realia emphasis.
4. Neuralgic point in the achievement profile.	Mathematics, science, (realia sphere).	Reading communication (humanistic sphere).
5. Differences between schools and classes.	Minor, or minimal (equal chances).	Very large (unequal chances).

Table 12

IEA surveys and reports

** = Not participated

Year of survey	Field of survey	Populations (year levels) surveyed	Main study publications		
			International	Hungarian	Finnish
1970	Science (IEA/FISS)	3-5; 8-9; 12	Comber & Keeves, 1973	Báthory, 1974	Saari, 1983
1970	Reading Comprehension	3-5; 8-9; 12	Thorndike, 1973	Kádárné, 1979a	
1971	English	8-9; 12	Lewis & Massad, 1975	Kádárné, 1979b	Takala & Saari, 1979
1980, 1981	Second Maths. (IEA/SIMSS)	8; 12	Robitaille & al., 1989	Radnainé, 1983	Kangasniemi, 1988, 1989
1982	Classroom Environment	6	Anderson & al., 1989	Joó, 1984	**
1983	Sec. Science (IEA/SISS*)	4; 8; 12	Postlethwaite & Wiley, 1991	Vári, 1988	Rikkinen, 1987
1983	Written Composition	6; 9; 12 **, 8; 12	Gorman & al., 1988; Purves, 1992. Degenhart, 1987;	Kádárné, 1990	Included in various international publications.
1989	Computers in Education	12	Pelgrum & Plomp, 1991	- -	**
1987-90; 1991-93; 1993-95	Preprimary Study	Preprimary age levels: 4-7.	Olmsted & Weikart, 1989.	**	Ojala 1991a, 1991b; 1993a, 1993b.
1991	Reading Literacy	3; 8	Elley, 1992; Lundberg & Linnakylä, 1992;	- -	Linnakylä, 1993

* Related to SISS, practical skills of eighth-graders in science were tested in Hungary (Doran et al., 1992).

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Theory and practice 87

In most countries, there is general concern for the quality of education. Issues related are those of the curricula, examinations, and educational evaluation. While indicators and comparative studies of education are becoming more widespread, interpretation of the data will benefit from an awareness of the context, practices and processes underlying such "snapshot" pictures. The main aim of this report is to provide some first-hand scholarly observations, supported by comparative reflection, on the situation in two nations having different histories but sharing a common spirit of high educational aspirations.

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